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ABSTRACT

This study is based on collections of harvestmen gathered from most parts of New Zealand. The morphology of structures of taxonomic significance is described and figured, and the value of the male genitalia as a taxonomic character is emphasised. A brief account of the biology of the group is given. The widespread occurrence of polymorphism among the New Zealand forms is recorded and discussed under two headings—(1) Sexual dimorphism, and (2) Male dimorphism. Sexual dimorphism is well known in the Opiliones but male dimorphism has not been previously recorded. The term Male Dimorphism refers to the occurrence of two distinct forms of the male of a species or sub-species with no intergradation between these two forms. The structures which may be affected are scute, chelicerae, pedipalps, and maxillary lobes of the second pair of pedal coxae. Similar polymorphism is known in mites.

Keys to all families, sub-families, tribes, genera, sub-genera, species and sub-species are given. The main divisions of the family Triaenonychidae are revised. Two sub-families and three tribes are recognised. Four genera and three sub-genera are newly described and a new family Synthetonychidae is established.

The number of species and sub-species known from New Zealand is increased from 30 to 152, all of which are endemic. Two species which have not been found in New Zealand since being described are considered to be exotic.

The composition of the fauna suggests a continental origin. The dominant family Triaenonychidae shows a typical southern distribution but the New Zealand representatives may, with few exceptions, be derived from the Australian fauna. There is little evidence to support dispersal via an Antarctic land bridge.

The restriction of the family Synthetonychidae to New Zealand may be of little significance in view of the lack of investigation into leafmould fauna in other countries.

Distribution within New Zealand is outlined and ten faunal provinces are listed, based on discontinuity of distribution. An attempt is made to correlate distribution with the geological history of the New Zealand area and it is suggested that the basic distribution patterns were moulded during pre-Pleistocene times, probably Pliocene, but modified during the Pleistocene and Recent periods. Rate of speciation is discussed and it is suggested that isolation in the order of 11,000 years has failed to produce any visible signs of speciation. The data presented support the hypothesis that Cook Strait has been breached in very recent times, and also that a number of connections both as between the Manawatu-Taranaki area of the North Island and the Nelson area of the South Island, and the Southern area of the North Island and Marlborough of the South Island have been effected after the establishment of the present Southern Alps as an efficient barrier to distribution.

ACKNOWLEDGEMENTS

The interest of the writer in harvestmen was first aroused during 1941, while employed at the Dominion Museum, Wellington, and I am deeply indebted to Dr W. R. B. Oliver and Dr J. T. Salmon for their kind encouragement during the initial stages of this study.

While due credit is given, with the records of each species, to the numerous collectors who have co-operated in an attempt to make this report as comprehensive as possible, I am particularly indebted to the late Mr A. C. O'Connor, Mr J. H. Sorensen, Mr R. K. Dell, Professor B. J. Marples, the late Miss O. Allan, Dr J. T. Salmon, Dr T. E. Woodward, Mr J. Dugdale and Mr L. P. Hughson for extensive collections placed at my disposal.

I also wish to express my thanks to Dr H. D. Skinner, Director, Otago Museum, and Dr R. A. Falla, Director, Dominion Museum, for permission to obtain on loan over an extended period collections under their care.

To Dr A. Kaestner of the Berlin Museum I am indebted for the loan of a number of crucial type specimens and to Dr O. Evans of the British Museum for notes and drawings of types housed under his care.

I also wish to express my appreciation of the generous gesture of Mr R. E. R. Grimmett, who not only handed over his valuable collection, which included the types of the species described in collaboration with Mr W. J. Phillipps, but also an unpublished manuscript describing further unrecorded species in this collection. This collection is now housed at the Dominion Museum.

To Drs C. A. Fleming and R. S. Allan and Mr R. K. Dell, I am greatly indebted for much information regarding geological questions and their possible effects on the distribution of plants and animals in New Zealand.

One must acknowledge the work accomplished by Professor Dr C. F. Roewer in establishing a firm systematic basis for studies such as this, and I also wish to express my appreciation for the ready assistance he has given in obtaining publications not available in New Zealand and for the numerous specimens and information which he has made available.

Finally I must express my thanks to Dr R. S. Duff, Director, Canterbury Museum, for his continued interest in the progress of this bulletin and his efforts to ensure that funds would be available for publication.

INTRODUCTION

Methods and Materials

The bulk of the material examined is deposited in the collections of the Canterbury Museum, Christchurch, and the Dominion Museum, Wellington. A series of paratype specimens and identified material will be deposited in the American Museum of Natural History, New York. The collection includes some 6,000-7,000 specimens preserved in an acetic-acid-glycerine-alcohol fluid, prepared in the following proportions:—

Alcohol 96% –9 parts
Distilled water –3 parts
Glycerine –1 part
Glacial acetic-acid –1 part

This fluid has been in use for over twelve years and gives excellent preservation with the advantage of keeping specimens perfectly relaxed.

It is unfortunate that only spasmodic use has been made of the structure of the male genitalia in systematic studies by previous writers. The consistent use of this structure would have done much to reduce the confusion at present existing in many groups where monotypic genera are the rule rather than the exception. In a group where striking external modifications in the form of tubercles and spines are often present, the more conservative structure of the penis provides an excellent guide to natural groupings of species. The extraction of the penis is a simple process. A slight pressure on the surface of the sternite immediately behind the genital operculum, causes the anterior lip to rise slightly allowing the operculum to be raised. The sternites are then cut back from one posterior corner of the genital opening to the retractor muscles of the penis. The penis may then be gently pushed out from the genital opening. It is necessary to remove the membraneous sheath which encloses the penis before examination in glycerine or as a permanent mount.

A number of mounting media have been used for the preparation of permanent mounts, but Polyvinyl Alcohol mounting medium (Type M.A.2, Salmon 1949) has proved to be most satisfactory. Measurements are all in millimetres. The customary use of body measurement has been replaced by that of the length and width of the scute as measurements of the total body length may vary considerably depending on the degree of extension or contraction of the free tergites and sternites. The measurements given for each species are of the type material where available. The size of the animal and the relative lengths of the legs are important and are in most cases subject to relatively little variation.

All drawings have been made with the aid of a camera lucida. The figures are not all reproduced to the same scale, but where the same structure of both male and female are figured (e.g., pedipalps) on a single plate, these structures are shown at the same magnification.

History of the New Zealand Fauna

Simon (1899) described the first species of the sub-order Laniatores from New Zealand, naming it *Triaenonyx obesus*, in a report on the Arachnids collected by Schauinsland from Stephen Island in Cook Strait. Loman (1902) overlooked Simon's paper and redescribed this species from further Stephen Island material under the name of *Nuncia sperata*. The second species described by Loman in this paper, *Adaeum nigriflavum*, included two distinct species. The first of Pocock's two important papers on New Zealand harvestmen appeared in the Proceedings of the Zoological Society of London in 1903. Pocock described three new species, two of which he placed in *Triaenonyx* (*Triaenonyx coriaceus* and *Triaenonyx sublaevis*) and established the genus *Soerensenella* for his third species, pointing out at the same time the marked development of the lateral branches of claws 3 and 4 in this genus. In his second paper, published in the Annals and Magazine of Natural History in the same year, Pocock transferred *sublaevis* to *Nuncia* Loman, and described a second species of *Soerensenella* (*Soerensenella bicornis*) from Christchurch. Hogg (1909) in a paper on Sub-Antarctic Arachnida described a harvestman collected from Enderby Island in the Auckland group as *Triaenonyx enderbei*. In a later paper, Hogg (1909) described two further species, *Triaenonyx testaceus* and *Triaenonyx stewartius*.

In 1920, Hogg described seven new species from New Zealand. Two of these species he placed in *Triaenonyx* (*Triaenonyx cockayni*, *Triaenonyx variegata*) and a third in *Nuncia* (*Nuncia smithi*). Three further species were placed in *Monoxyomma* (*Monoxyomma hendei*, *Monoxyomma tuberculata* and *Monoxyomma trailli*) and a new genus *Algidia* was established for *Algidia cuspidata* from Mount Algidus in Canterbury.

The first paper published by New Zealand authors was a joint paper by Phillipps and Grimmett in 1932. They described four new species of Laniatores, *Triaenobunus hamiltoni*, *Triaenonyx parva*, *Monoxyomma myersi*, and *Sorensenella rotara*.

In 1915 Roewer reviewed the family Triaenonychidae and placed most of the New Zealand species described under *Triaenonyx* Soer., into *Nuncia* Loman but placed two of them, *testaceus* and *stewartius* into a new genus *Metanuncia* and also transferred *Triaenonyx enderbei* Hogg to *Neonuncia*. In this paper Roewer divided the Triaenonychidae into three sub-families, viz., Triaenonychinae, Triaenobuninae and Adaeinae. He also described a new species of *Nuncia* (*Nuncia ovata*) from Christchurch. Roewer's treatment of the New Zealand species in his monumental work *Die Weberknechte der Erde*, published in 1923, is substantially the same as that published earlier, but having subsequently examined Loman's type material of *Adaeum nigriflavum* he placed the female specimens into *Nuncia* as *Nuncia nigriflavum* (Loman) while the male specimen was retained as *Adaeum nigriflavum* (Loman). In the sixth supplement to the "Weberknechte," Roewer (1931) published a revision of Hogg's (1920) paper which had been overlooked in his world monograph and at the same time described eight species new to the New Zealand fauna. Eight new genera were established in this paper, three of which were for species previously described by Hogg. *Triaenonyx cockayni* Hogg was considered to be a synonym of *Nuncia sperata* Loman, and *Monoxyomma trailli* Hogg to be a synonym of *Soerensenella bicornis*. In a recent paper (1942), Roewer described *Nuncia insulana* from the Campbell Islands.

Forster (1943) redescribed *Adaeum nigriflavum* Loman, placing *Algidia cuspidata* as a synonym, and described three new species of *Adaeum*. In a further paper (Forster, 1948) a new genus *Triregia* was established for a species from the Three Kings Island and *Adaeum bilineatum* Forster, 1943, was transferred to this genus.

In the present paper, a considerable number of modifications of previous authors' conclusions have been necessary and 110 new species and subspecies are described.

In the left hand column the names available for New Zealand species are listed with their status in the present paper on the right:—

ORIGINAL NAME	PRESENT STATUS
Triaenonyx obesus Simon, 1899	Nuncia obesa (Simon, 1899)
Triaenonyx coriaceus Pocock, 1903	Nuncia coriacea (Pocock, 1903)
Triaenonyx testaceus Hogg, 1910	Nuncia sublaevis (Pocock, 1903)
Triaenonyx stewartius Hogg, 1910	Nuncia stewartia (Hogg, 1910)
Triaenonyx cockayni Hogg, 1920	Nuncia coriacea (Hogg, 1920)
Triaenonyx variegata Hogg, 1920	Nuncia variegata (Hogg, 1920)
Triaenonyx parva Grimmett and Phillipps, 1932	Nuncia nigriflava parva (Grimmett and Phillipps, 1932)
Triaenonyx enderbei Hogg, 1909	Neonuncia enderbyi (Hogg, 1909)
Nuncia sperata Loman, 1902	Nuncia obesa (Simon, 1899)
Nuncia sublaevis Pocock, 1903	Nuncia sublaevis (Pocock, 1903)
Nuncia smithi Hogg, 1920	Nuncia smithi Hogg, 1920
Nuncia ovata Roewer, 1914	Nuncia coriacea cockayni (Hogg, 1920)
Nuncia opaca Roewer, 1931	Neonuncia opaca (Roewer, 1931)
Nuncia nigriflava (Loman), Roewer, 1923	Nuncia nigriflava Roewer, 1923
Nuncia insulana Roewer, 1932	Neonuncia enderbyi (Hogg, 1909)
*Psalenoba nunciaeformis Roewer, 1931	Psalenoba nunciaeformis Roewer, 1931
*Monoxyomma hendei Hogg, 1920	Hendea hendei (Hogg, 1920)
Monoxyomma tuberculatum Hogg, 1920	Prasma tuberculata (Hogg, 1920)
Monoxyomma trailli Hogg, 1920	Karamea trailli (Hogg, 1920)
Monoxyomma myersi Phillipps and Grimmett, 1932	Hendea myersi (Phillipps and Grimmett, 1932)
Triaenobletis crassipalpus Roewer, 1931	Prasma tuberculata (Hogg, 1920)
Hedwiga manubriata Roewer, 1931	Hedwiga manubriata Roewer, 1931
Adaeum nigriflavum Loman, 1902	Algidia nigriflava (Loman, 1902) Nuncia nigriflava Roewer, 1923
Adaeum hoggi Forster, 1943	Algidia chiltoni Roewer, 1931
Adaeum bilineatum Forster, 1943	Triregia bilineata (Forster, 1943)
Adaeum fairburni Forster, 1943	Triregia fairburni (Forster, 1943)
Algidia cuspidata Hogg, 1920	Algidia cuspidata Hogg, 1920
Algidia chiltoni Roewer, 1931	Algidia chiltoni Roewer, 1931
Algidia akaroa Roewer, 1931	Algidia cuspidata Hogg, 1920
Cenefia adaeiformis Roewer, 1931	Cenefia adaeiformis Roewer, 1931
Triaenobunus acuminatus Hogg, 1920	Pristobunus acuminatus (Hogg, 1920)
Triaenobunus hamiltoni Phillips and Grimmett, 1932	Pristobunus acuminatus hamiltoni (Phillipps and Grimmett, 1932)
Soerensenella prehensor Pocock, 1903	Soerensenella prehensor Pocock, 1903
Soerensenella bicornis Pocock, 1903	Soerensenella bicornis Pocock, 1903
Soerensenella rotara Phillipps and Grimmett, 1932	Soerensenella rotara Phillipps and Grimmett, 1932
Nunciella granulata Roewer, 1931	Not found in New Zealand
Dampetrellus scaber Roewer, 1926	Not found in New Zealand

Of the thirty-seven names previously proposed, thirty are retained, twenty-seven as full species and three as sub-species while two are considered to have been erroneously attributed to the New Zealand fauna.

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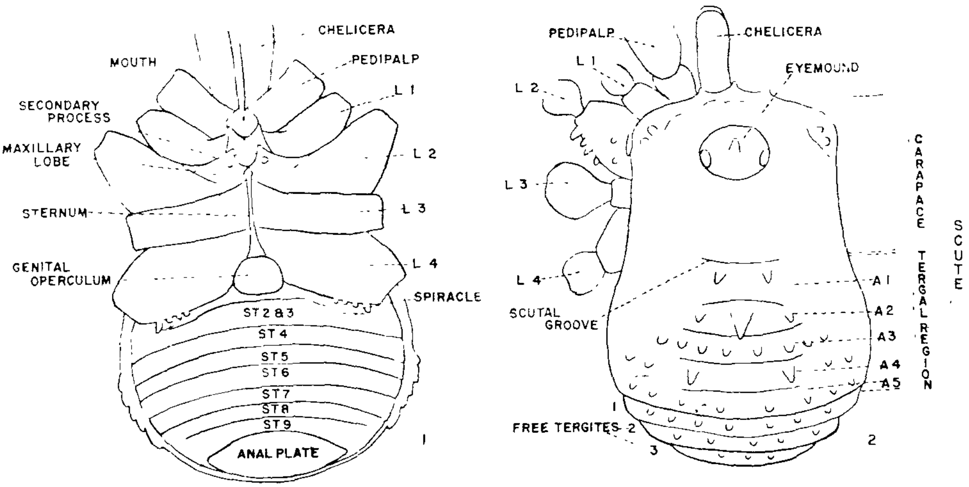
*These species have not been recognized by the author amongst the material examined and the types have not been available for examination.

GENERAL MORPHOLOGY

This section is intended for use primarily as a glossary of the terms used in systematic descriptions and refers to the two families found in New Zealand, Triaenonychidae and Synthetonychidae.

Body: (Figs. 1 and 2).

The prosoma is covered by a plate which shows no trace of the primitive segmentation. This plate is termed the *cephalothoracic carapace* or simply the *carapace.* The carapace bears two simple eyes which are usually placed on a median tubercle or *eyemound* (Triaenonychidae) or the eyemound may be absent (*Synthetonychidae*). The eyemound when present may be rounded or variously modified (Figs. 9-12). In all New Zealand species the eyes are closely spaced. The scent glands open from the sides of the carapace and are hidden from view by a projection on the dorsal surface of coxae II. The opisthosoma is segmented. There are nine tergites. The first five are always fused to the carapace and are immovable but are often distinguished by transverse grooves or the grouping of tubercles or pustules. The shield formed by the fusion of the carapace and tergites 1–5 is termed the *scute.* The portion of the scute which is formed by the tergites is referred to as the *tergal region.* When the individual tergites are distinguished by transverse grooves, tubercles or pustules they are named separately as *tergal areas* 1–5. Tergites 6-8 are not fused and are termed *Free Tergites* 1–3. The ninth tergite which is ventral in position, covers the anal opening and is referred to as the *anal plate.* There are nine sternites, of which the first may be present as a pair of small plates bounding the genital opening but is usually absent; the second and third are fused together and bear the spiracles. Sternites 4–7 are free, 8–9 are fused and form the posterior margin of the anal opening. The mouth is situated anterior to the coxae of the first pair of legs and is provided with chewing plates on the coxae of the pedipalps and anterior legs. The sternum is a narrow median plate which extends from the anterior margin of the genital opening to near the mouth. Three main forms are found in the Triaenonychidae (Figs. 13–15).



FIGS. 1-2 *Body of Hendea sp.*
Fig. 1 Ventral surface; Fig. 2 Dorsal surface.

Genitalia

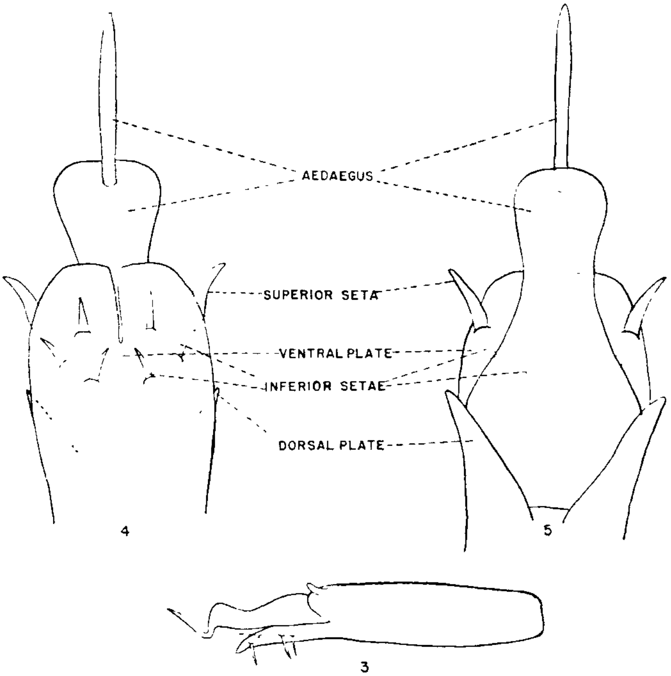
The genital opening is situated between the fourth pair of pedal coxae. It is covered by a movable plate—the *genital operculum*—which is hinged along the posterior margin. The male genitalia or penis has been little studied and a satisfactory terminology for the various structures awaits a more comprehensive study than has been possible in the present paper.

The normal form encountered in the Triaenonychidae consists of a proximal tubular portion and a complex apical portion (Fig. 3). The apical portion is usually separable into three parts (Figs. 4–5):—

(1) A median *aedeagus* which varies considerably in form between genera and to a lesser degree between species. This may be tubular or spiniform or variously distended in shape and may be provided with accessory processes, spines, combs, etc.

(2) Above the aedeagus are two projections which I have termed the *dorsal plates*. These processes may be spinous or flattened or in some cases absent, but never carry setae. (Some Synthetonychidae lack both dorsal and ventral plates).

(3) Below the aedeagus there is a further process usually in the form of a thin shield which I have termed the *ventral plate*. This may be entire or partially or completely divided to form two discrete plates. The ventral plate is provided with setae arranged in two lateral groups. Each group of setae may be separated into the *superior setae* which are inserted on the dorsal surface of the plate, and the *inferior setae* which are inserted on the ventral surface. At least four to five setae are present in each group, usually one or two superior and three inferior in position.



FIGS. 3-5 Male genitalia of Hendea sp.
Fig. 3 Lateral view; Fig. 4 Ventral view; Fig. 5 Dorsal view.

In a number of genera further plates and processes are present. The male genitalia of *Algidia* consists of a complex series of convoluted semi-transparent plates which I have not been able to separate satisfactorily in spite of considerable experimentation with various mounting media. These genitalia I have omitted from the systematic section dealing with this genus.

Chelicerae (Figs. 7–8)

These are always relatively small. They are three segmented and chelate. The three segments are termed herein *basal segment, second segment,* and *chela,* or

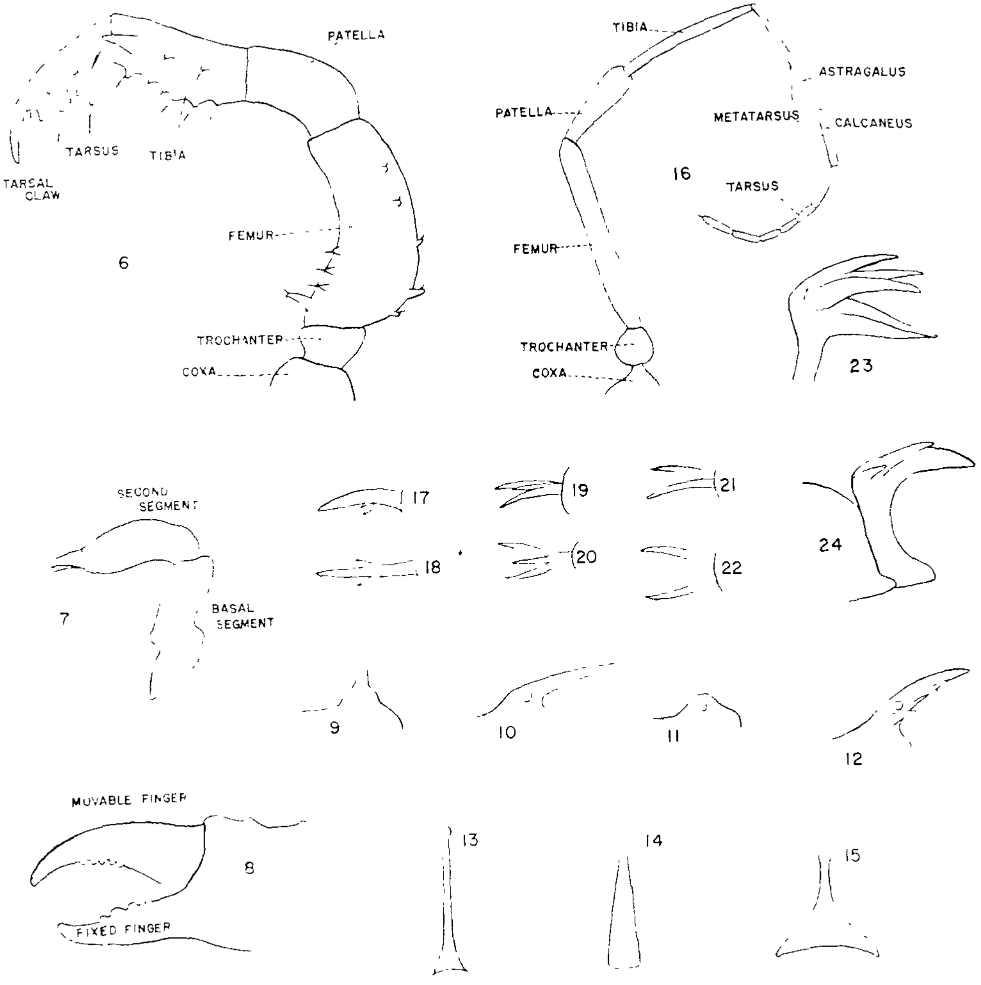


Fig. 6 Pedipalp of *Hendea* sp.; Fig 7 Chelicera. Fig 8 Chela of chelicera; Fig. 9 Eyemound *Soerensenella* sp.; Fig. 10 Eyemound *Karamea* sp.; Fig. 11 Eyemound *Nuncia* sp.; Fig. 12 Eyemound *Pristobunus* sp.; Fig. 13 Sternum tribe *Triaenonychini*. Fig. 14 Sternum, tribe *Adaeini*; Fig. 15 Sternum, tribe *Triaenobunini*; Fig. 16 Leg I *Hendea* sp.; Fig. 17-18 Claw of tarsus 4, sub-family *Triaenonychinae*; Fig. 17 Lateral view; Fig. 18 Ventral view; Figs. 19-20 Claw of tarsus 4, sub-family *Soerensenellinae*; Fig. 19 Lateral view; Fig. 20 Ventral view; Figs. 21-22 Claw of tarsus 4, family *Phalangodidae*; Fig. 21 Lateral view; Fig. 22 Ventral view; Fig. 23 Claw of tarsus 4, family *Synthetonychidae*; Fig. 24 Claw of tarsus 4, family *Travuniidae*.

movable finger. The second segment is produced on the inner distal edge and the chela is articulated to the base of this process. The opposing surfaces of both process and chela are armed with small teeth.

Pedipalps (Fig. 6)

These are six segmented, *coxa*, *trochanter*, *femur*, *patella*, *tibia* and *tarsus*. The tarsus bears a strong terminal claw. The femur, tibia and tarsus are normally much stronger than the other segments. All segments are usually armed with tubercles. In most cases these tubercles are provided with a seta, inserted on the sub-distal surface. The tibia and tarsus are usually flattened ventrally, and concave dorsally (Triaenonychidae) with tubercles arranged along the latero-ventral margins. In the Synthetonychidae the pedipalps are without setose tubercles and all segments are tubular in cross-section.

Legs (Fig. 16)

Seven-segmented, consisting of *coxa*, *trochanter*, *femur*, *patella*, *tibia*, *metatarsus* and *tarsus*. The coxa of leg 2 is provided with a flat inner plate, the *maxillary lobe* which is fused to the coxa but is normally separated from it by a shallow groove. This plate is always smooth in the females but in males it may be armed with *secondary processes* which take the form of tubercles, granules or lobes. As mentioned before, there is a projection on the dorsal surface of coxa 2 which conceals the opening of the scent glands of the prosoma. The metatarsus is divided by a constriction of the segment into two sections, a basal *astragalus* and a distal *calcaneus*, which are immovable in relation to each other. In all New Zealand species the calcaneus is shorter than the astragalus. The tarsi of all legs are divided into a number of movable segments. The number of segments of tarsus 2 is usually greater than that of the remaining tarsi. The *tarsal formula* is the count of the segments from the first leg to the fourth. The tarsal count for legs 1, 3 and 4 is constant within a species or sub-species, while that of tarsus 2 is subject to considerable variation. In some species the tarsal count of leg 1 of the male is greater than that of the female.

SYSTEMATICS

Order OPILIONES Sundevall 1833

The Order Opiliones includes those members of the Class Arachnida which possess the following characteristics: uniform, unsegmented prosoma broadly joined with the opisthosoma; opisthosoma with nine tergites and sternites, more or less united; prosoma with two simple eyes, usually placed on a median tubercle, and a pair of scent glands; three-segmented chelate chelicerae; six-segmented pedipalp; small sternum, a pair of spiracles on the second sternite; respiration by trachea; genital openings between last coxae; well developed penis and ovipositor; copulation direct (copulation may be indirect in the Cyphophthalmi (Forster M.S).

The Order Opiliones is divided into three Sub-orders, which may be separated as follows:—

1. Openings of the scent glands each placed at the extremity of a conical tubercle situated on the cephalothoracic carapace. Genital opening not covered by an operculum..........................Sub-order *Cyphophthalmi* Simon, 1879.

Openings of the scent glands not placed on a tubercle but opening from the side of the cephalothoracic carapace. Genital opening covered by an operculum..2

2. Pedipalp strong, usually spinous, with a stout clasping claw on the tarsus. Tarsi of legs 3 and 4 with two claws or a branched single claw.. Sub-order *Laniatores* Thorell, 1876.

Pedipalp weak, with a weak terminal claw, or claw absent. Tarsi of legs 3 and 4 with a single simple claw............Sub-order *Palpatores* Thorell, 1876.

All three sub-orders are strongly represented in New Zealand. The Cyphophthalmi have been covered in two earlier papers (Forster 1948, 1952). The New Zealand Palpatores will be the subject of an extensive paper at a later date.

Sub-order LANIATORES Thorell, 1876

Opiliones with two eyes, usually placed on a median tubercle, but tubercle sometimes absent; if so, eyes on median surface of the carapace or widely separated from each other; scent glands opening from the carapace above the second pair of pedal coxae, not situated on tubercles; tergites of prosoma not demarcated but fused into a carapace; abdomen with nine tergites, of which the first five are fused with the cephalothoracic carapace to form a dorsal scute, tergites 6–8 free and tergite 9 present as a movable plate over the anus; nine sternites, sternite 1 rarely visible, 2 and 3 fused bearing the spiracle, 4–7 free, 8 and 9 fused to each other behind the anal opening. Genital opening covered by a movable operculum. Pedipalps strong, usually armed with setose tubercles; tarsus with a strong clasping terminal claw. Tarsal claws of legs 1 and 2 with a single simple claw, 3 and 4 with paired claws or a single claw with lateral branches.

This sub-order is usually separated into seven families to which a new family is added in this paper. Only two families are found in New Zealand, *Triaenonychidae* Soerensen and *Synthetonychidae* n.fam. These two families may be separated as follows:—

Pedipalps armed with setose tubercles. Claws of legs 3 and 4 with a single pair of lateral branches................................ Family *Triaenonychidae* Soerensen, 1886.

Pedipalps lacking setose tubercles. Claws of legs 3 and 4 with two or three pairs of lateral branches... Family *Synthetonychidae* n.fam.

Family TRIAENONYCHIDAE Soerensen, 1886

Two simple eyes, usually placed on a median tubercle, but if tubercle absent eyes never widely separated. Tergal areas usually demarcated by transverse grooves or by the disposition of tubercles or pustules. Anterior margin of the carapace without five tubercles (2:1:2) but usually with three projections, one median and one at each side of the chelicerae. Openings of the scent glands hidden by a projection from the dorsal surface of coxae 2. Coxae stout and usually more or less parallel; coxae 4 stouter than coxae 3 and directed back, but seldom greatly enlarged; retrolateral margin of coxae 4 fused with sternites, spiracles visible or hidden in a groove between coxa and sternite. Maxillary lobes of coxae 2 fused with coxa but usually separated by a faint groove. Pedipalps large, much stronger than legs, not crossed in the region of the trochanter; armed with setose tubercles; tarsal claw strong. Metatarsi of legs usually divided by a constriction into two sections, a proximal astragalus and a distal calcaneus. Tarsi 1 and 2 with a single claw 3, and 4 each with a trifurcate claw. Tarsi 3 and 4 without pseudonychium, arolium or scopula.

Distribution: New Zealand. Australia. New Caledonia, Madagascar, South Africa, Chile, North America.

This family reaches its greatest development in New Zealand, Australia and South Africa.

Roewer (1914, 1923) recognized three sub-families, viz. Triaenonychinae, Triaenobuninae and Adaeinae, separated mainly on the structure of the sternum. During the course of my studies of the Australian and New Zealand harvestmen it has become evident that this division does not reflect a natural division of the family and that it would be highly desirable for the family to be fully revised and a more natural classification established. This, however, has not been possible because of the difficulty of examining the important South African fauna. In the present paper I propose separating the Triaenonychidae into two sub-families Triaenonychinae and Soerensenellinae, basing the division mainly on the structure of the tarsal claws of legs 3 and 4 and the striking difference in behaviour pattern between the two groups shown at least in the New Zealand species. I have meanwhile retained Roewer's sub-family grouping as *tribes* of the Triaenonychinae.

Key to the Sub-families of the Triaenonychidae

Side branches of tarsal claws of legs 3 and 4 much shorter than median prong. .... Sub-family *Triaenonychinae* Pocock, 1903.

Side branches of tarsal claws of legs 3 and 4 equal in length to, or longer than, the median prong ....Sub-family *Soerensenellinae* n.sub.fam.

Sub-family TRIAENONYCHINAE Pocock, 1903

Triaenonychids with the side branches of claws of legs 3 and 4 much shorter than the median prong. Eggs laid singly or in small groups, not subsequently guarded.

Oviposition has been observed in a large number of the New Zealand species covering all the genera except *Prasmiola* and *Muscicola*, both of which will probably prove to have habits similar to the species of *Prasma* and *Pristobunus* respectively, to which they are closely related.

Key to the Tribes of the Sub-family Triaenonychinae

1. Sternum slender, with a lance-shaped expansion anteriorly and lateral expansions posteriorly..2
   Sternum sub-triangular or wedge-shaped, without anterior and posterior expansions (Fig. 14)..Tribe *Adaeini* Pocock, 1903.
2. Width of posterior expansion much less than length of sternum (Fig. 13).
   Tribe *Triaenonychini* Pocock, 1903.
   Width of posterior expansion equal to, or more than, the length of the sternum (Fig. 15) ....Tribe *Triaenobunini* Pocock, 1903.

Tribe TRIAENONYCHINI Pocock, 1903

Key to the New Zealand Genera of Triaenonychini

1. Scute without pustules..2
   Scute pustulate..6
2. Proximo-dorsal surface of basal segment of chelicera of male with a prominent rounded process..*Neonuncia* Roewer, 1914
   Not as above..3
3. Eyemound with a prominent apical spine..4
   Eyemound usually smooth, but sometimes with a short apical tubercle.........5
4. Tarsus 1 with seven segments. Femur of male pedipalp elongate and strongly curved .. ..*Hedwiga* Roewer, 1931
   Tarsus 1 usually with from 5–6 segments. Femur of male pedipalp never greatly elongate or curved..*Hendea* Roewer, 1931
5. Tergal areas not defined by transverse grooves. Tarsus 1 of male usually 3-segmented (occasionally 4-segmented), female always 3-segmented........... ....*Nuncia* Loman, 1902.
   Tergal areas defined by transverse grooves. Tarsi 1 of male and female segmented..*Hendeola* n.gen.
6. Anterior margin of the carapace armed with strong spines.......................7
   Not as above..8
7. Dorsal pattern strongly developed, without strong tubercles on areas 1–4 ....*Algidia* Hogg, 1920.
   Dorsal pattern not strongly developed, with strong, usually spinous, tubercles on tergal areas..*Triregia* Forster, 1948
8. Tarsus 1.3– or 4–segmented ....*Prasma* Roewer, 1931
   Tarsus 1.8–segmented..*Prasmiola* n.gen.

Genus *NUNCIA* Loman, 1902

1899 *Triaenonyx* (Part) Simon, Zool.Jahrb. Syst.12, p.431.
1902 *Nuncia* Loman, Zool.Jahrb. Syst., 16. p.213.
1903 *Triaenonyx* (Part) Pocock, Proc.Zool.Soc. London.
1903 *Nuncia* Pocock, Ann.Mag.Nat.Hist. Ser.7 (11), p.445.
1915 *Nuncia* Roewer, Arch.Naturg, 80 A (12): p.76.
1915 *Metanuncia* Roewer *ibid.* p.101.
1920 *Triaenonyx* (Part) Hogg, Proc.Zool.Soc.London, p.38.
1920 *Nuncia* Hogg *ibid.* p.41.

1923 *Nuncia*, Roewer, Die Weberknechte der Erde, p.591.
1923 *Metanuncia*, Roewer *ibid.* p.602.
1932 *Triaenonyx* (Part) Phillipps and Grimmett, Proc.Zool.Soc., London, p.735.

Eyemound rising directly from the anterior margin of the carapace, usually smooth and rounded, sometimes with a small apical tubercle or produced forward. Scute including the anterior margin of the carapace without promineht tubercles or pustules. Tergal areas not defined. Legs unarmed, calcaneus much shorter than astragalus and never notched. Tarsal formula 3–4, 5–15, 4, 4 (some species with four segments to tarsus 1, in male, but three in female). Side branches of claws 3 and 4 much smaller and weaker than median prong. Both sexual and male dimorphism present.

Genotype (o.d.) *Nuncia sperata* Loman, 1902 = *Triaenonyx obesus* Simon, 1899.

Loman established this genus for his species *Nuncia sperata* from Stephen Island, overlooking Simon's early description of *Triaenonyx obesus* from the same locality. I have not been able to examine Simon's type material, but the two descriptions are almost identical and undoubtedly synonymous. A large proportion of the New Zealand species of the Laniatores are places in this genus, separated from *Triaenonyx* (found only in South America) by the short calcaneus which in *Triaenonyx* is equal in length to or longer than the astragalus. The study of the male genitalia of all the New Zealand species indicates that there are three groups within the genus. These I have established as sub-genera, viz. *Nuncia, Corinuncia,* and *Micronuncia.* In 1914 Roewer placed an Australian species as *Nuncia serriata* Roewer. This species does not belong in this genus. Hickman (1939) redescribed *Promecosthetus unifalculatus* Enderlein from Crozet Island and transferred the species to *Nuncia.* It is clear from Hickman's excellent description that this species should in fact be placed in either *Nunciella* or *Neonuncia.*

Key to the Sub-Genera of NUNCIA Loman, 1902

1. Aedagus without lateral processes..2
   Aedagus with a pair of lateral processes..................................3
2. Scute usually smooth or finely granulate, not strongly coriaceous; scutal groove distinct; maxillary lobes of coxae 2 smooth.................. *Nuncia* Loman, 1902
3. Scute smooth or finely granulate; maxillary lobes of the male with a row of five bead-like granules; lateral branches of the aedeagus pectinate .... *Psalenoba* Roewer 1931
   Scute coriaceous; maxillary lobes of male sometimes with a single process but not as above; lateral branches of the aedeagus smooth...... *Corinuncia* n.sub-gen.

Sub-genus NUNCIA n.sub-gen.

Aedagus with or without a sheath, always without lateral processes. Scute only lightly coriaceous, or smooth. Eyemound usually smooth, sometimes with a small apical tubercle. Maxillary lobes of coxae 2 smooth or with secondary processes in the male, never in the form of small granules.

Subgenotype *Triaenonyx obesus*, Simon 1899

Key to the males of the Sub-genus NUNCIA

1. Aedeagus with sheath...2
   Aedeagus without sheath..18

2. Five pairs of small tubercles present on the median surface of the tergal region of the scute 3

Scute finely granulate or coriaceous but lacking tubercles........................5

3. Strong tubercles present on the ventral surface of the pedipalp femur.........4

Only small conical or rounded tubercles present on the ventral surface of the pedipalp femur.................................... *oconnori paucispinosa* n.s.sp.

4. Eyemound with a short apical tubercle.............................*oconnori* n.sp.

Eyemound smoothly rounded.................................*oconnori kopua* n.s.sp.

5. Pedipalp femur with a pair of tubercles on the proximoventral surface.........6

Pedipalp femur with a single tubercle on the proximoventral surface...........7

6. Maxillary lobes of coxae 2 with a pronounced ridge.................*tumula* n.sp.

Not as above..8

7. Length of scute 5.2–6.1 millimetres *obesa* (Loman).

Length of scute 6.7–7.8 millimetres *obesa maxima* n.s.sp.

Length of scute 4.4–4.8 millimetres *obesa grimmetti* n.s.sp.

Length of scute 3.7–4.3 millimetres *obesa rotunda* n.s.sp.

8. Sheath extending the entire length of the aedeagus................................9

Sheath extending only two-thirds of the length of the aedeagus..............15

9. Eyemound directed forward, usually with an apical tubercle..................10

Eyemound not directed forward...12

10. Eyemound with an apical spinous process...11

Eyemound rounded anteriorly..*stabilis* n.sp.

11. Length of apical spine greater than height of eyemound..............*arcuata* n.sp.

Length of apical spine less than height of eyemound.. *arcuata aorangiensis* n.s.sp.

12. Superior setae of the ventral plate of the penis extending to, or beyond, the anterior margin 13

Superior setae of the ventral plate of the penis absent, or if present, not reaching the anterior margin.. 14

13. Superior setae absent. Two strong tubercles present on the proximo-ventral surface of the pedipalp femur..*vidua*, n.sp.

Superior setae present. Two small rounded tubercles present on the proximo-ventral surface of the pedipalp femur..................................*fatula* n.sp.

14. Three tubercles present on the proximo-ventral surface of the pedipalp femur, ...*constantia* n.sp.

Two tubercles present on the proximo-ventral surface of the pedipalp femur, ...*conjuncta* n.sp.

15. Eyemound with a small apical tubercle...16

Not as above 17

16. Eyemound rising directly up from the anterior margin of the carapace, ...*heteromorpha* n.sp.

Eyemound directed forward beyond the anterior margin of the carapace, ...*heteromorpha prolobula* n.s.sp.

17. Eyemound rounded..18

Eyemound conical ....*oconnori conocula* n.s.sp.

18. Eyemound relatively high. Ventral plates stout.......................*tumula* n.sp.

Eyemound low. Ventral plates slender..................................*sulcata* n.sp.

19. Aedeagus smooth. Eyemound without apical tubercle............................20

Aedeagus armed with small teeth. Eyemound with prominent apical tubercle .... *tapanuiensis* n.sp.

20. Eyemound conical or rounded 21
Eyemound flattened..*inopinata* n.sp.

21. Ventral plate divided...22
Ventral plate entire, flattened..*grandis* n.sp.

22. Eyemound smoothly rounded. Strong secondary process present on maxillary lobes of coxa 2...*magnopercula* n.sp.
Eyemound with a small apical tubercle. Maxillary lobes without secondary process..*magnopercula fiordensis* n.s.sp.

Nuncia (Nuncia) obesa (Simon, 1899)

1899 *Triaenonyx obesus* Simon, Zool.Jahrb.Syst.12, p.431.
1902 *Nuncia sperata* Loman, Zool.Jahrb.Syst. 16, p.213.
1915 *Nuncia sperata* Loman, Roewer, Arch.Naturg.80A (12), p.213.
1923 *Nuncia sperata* Loman, Roewer, Die Wederknechte der Erde, p.591.

Figs. 25–30.

Male

Colour. Ground colour of scute deep orange-brown. A dull reddish-brown band curves back along each lateral margin of the tergal region, while a further median band, broad distally but narrowing posteriorly, extends back down the scute. These three bands enclose a sub-triangular orange area on each side of the scute. The free tergites are dark-brown. The ventral surface of the body is orange-brown. The dorsal surface of the pedipalp is covered with faint grey reticulate markings. The legs are light-brown with irregular black shading.

Body. The scute is weakly coriaceous. The eyemound is smoothly rounded and wider than high in the ratio of 17:11. Scutal groove prominent (Fig. 25). The free tergites are coriaceous and lack tubercles or granules. The maxillary lobes of coxae 11 are simple, as shown in Fig. 26.

Genitalia. (Fig. 27). The aedeagus is long and slender, tubiform, curved apically, with a prominent sheath extending to two-thirds of its length and armed with a number of small teeth on the apical fold. Dorsal and ventral plates paired, each ventral plate with one superior and two inferior setae.

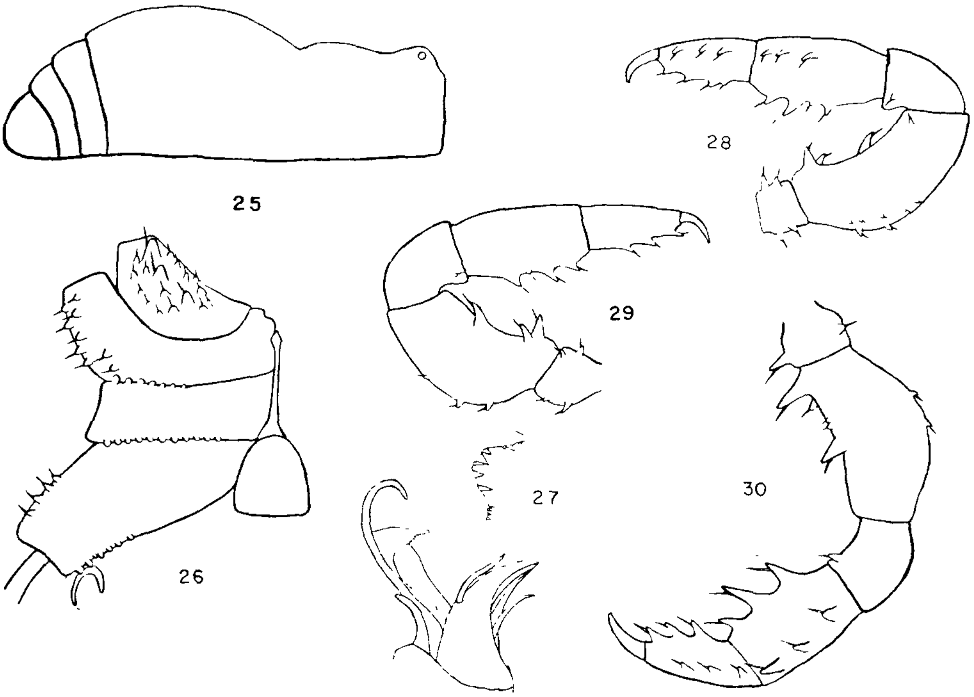
Chelicerae. There is a shallow groove on the proximo-dorsal surface, with a group of small tubercles on the pro-dorsal surface immediately beyond this groove and two small tubercles on the inner disto-dorsal surface. A number of sharp tubercles are also present on the dorsal surface of the second segment.

Pedipalps. Figs. 28, 29. There are four small spines on the dorsal surface of the trochanter and two larger spines on the ventral surface. There are two large teeth on the proximal half of the dorsal surface of the femur and a number of small teeth on the pro-dorsal surface. Three strong spines are present on the ventral surface, two proximal and the other median. The patella is smooth apart from a small tubercle on the pro-lateral surface, and one on the retro-ventral surface. The tibia and tarsus are flattened beneath and provided with three spines on both pro- and retro-ventral surfaces.

Legs. All segments other than metatarsi and tarsi sparsely granulate. Coxae as in Fig. 26. There are numerous tubercles on the ventral surface of coxa 1, retro-lateral surface of coxa 11 and pro-lateral surface of coxa IV. There is a row of granules

Table 1.—TABLE SHOWING COMPARATIVE MEASUREMENTS OF FORMS OF *NUNCIA* (*NUNCIA*) *OBESA* (in millimetres)

		Length Scute	Width Scute	Femur 1	Femur 2	Femur 3	Femur 4	Pedipalp Femur
magna								
Canaan ♂♂ (3)	Range	7.2–7.8	7.0–7.8	3.3–3.9	4.8	3.1–3.5	4.1–4.8	4.0–4.4
	Mean	7.3	7.3	3.6	4.8	3.3	4.4	4.2
Kairuru ♂♂ (2)	Range	6.7–7.2	6.4–6.9	3.2–3.7	4.4–4.8	3.0–3.3	4.0–4.4	3.3–4.0
	Mean	6.9	6.6	3.5	4.6	3.2	4.2	3.7
Canaan ♀♀ (2)	Range	6.3–6.8	5.5–6.1	2.6	3.3–3.5	2.4–2.6	3.3–3.7	2.4
	Mean	6.6	5.8	2.6	3.4	2.5	3.5	2.4
obesa								
Stephen Is. ♂♂ (10)	Range	5.2–6.1	4.8–5.5	2.2–2.9	3.1–3.7	2.2–2.4	3.1–3.7	2.2–3.1
	Mean	5.7	5.0	2.4	3.4	2.3	3.4	2.6
Maitai Valley ♂♂ (2)	Range	5.9–6.1	5.1–5.4	2.5–2.6	3.5–3.7	2.2–2.3	3.5	2.8–2.9
	Mean	5.95	5.2	2.53	3.6	2.26	3.5	2.83
Stephen Is. ♀♀ (10)	Range	5.1–6.1	4.6–5.0	2.0–2.2	2.9–3.3	2.1–2.3	2.9–3.1	1.8–2.0
	Mean	5.5	4.8	2.1	3.1	2.2	3.0	1.9
Maitai Valley ♀♀ (6)	Range	5.2–6.1	4.8–5.6	2.2–2.6	3.0–3.3	2.2	2.9–3.3	1.8–2.2
	Mean	5.4	5.0	2.3	3.1	2.2	3.1	2.0
grimmetti								
North Island ♂♂ (20)	Range	4.6–4.8	4.1–4.3	1.9–2.2	2.6–2.9	1.8–2.0	2.6–3.1	1.9–2.1
	Mean	4.7	4.2	2.0	2.8	1.9	2.8	2.0
South Island ♂♂ (20)	Range	4.4–4.8	3.9–4.2	1.9–2.2	2.6–2.8	1.8–2.1	2.6–2.8	1.9–2.1
	Mean	4.6	4.1	2.0	2.7	1.9	2.7	2.0
North Island ♀♀ (20)	Range	4.6–4.8	3.9–4.2	1.7–2.0	2.5–2.6	1.8–1.9	2.4–2.6	1.5–1.8
	Mean	4.7	4.2	1.8	2.6	1.81	2.5	1.6
South Island ♀♀ (20)	Range	4.6–4.8	4.0–4.4	1.8–1.9	2.3–2.7	1.5–1.8	2.4–2.8	1.6–1.9
	Mean	4.7	4.8	1.82	2.6	1.7	2.6	1.7
rotunda								
♂♂ (10)	Range	3.7–4.3	3.1–3.7	1.5–1.8	1.7–2.3	1.4–1.5	1.9–2.3	1.3–1.8
	Mean	4.1	3.3	1.6	2.1	1.45	2.1	1.6
♀♀ (10)	Range	3.6–3.9	3.1–3.4	1.3–1.5	1.6–2.1	1.1–1.4	1.6–2.0	1.2–1.4
	Mean	3.8	3.3	1.4	1.9	1.3	1.8	1.3



FIGS. 25-30 *Nuncia* (*Nuncia*) *obesa obesa* (Simon)
Fig. 25 Lateral view of body; Fig. 26 Coxal region male; Fig. 27 Male genitalia; Fig. 28 Pro-lateral view male pedipalp; Fig. 29 Retro-lateral view male pedipalp; Fig. 30 Pro-ventral view female pedipalp.

along the pro-ventral and retro-ventral margins of coxa III and the distal third of the retro-margin of coxa IV. Tarsal segments 3, 8–11, 4, 4.

Measurements

Scute Length 6.00 Width 4.80

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.41	0.70	2.73	1.41	2.24	3.03	1.94	13.46
Leg 2 ..	2.77	0.88	3.70	1.72	3.43	4.10	3.70	20.30
Leg 3 ..	2.16	0.84	2.24	1.32	2.24	3.17	1.98	13.95
Leg 4 ..	2.60	0.92	3.30	1.58	3.08	4.58	2.82	18.88
Pedipalp ..	—	0.88	2.68	1.32	2.42	—	1.41	8.71
Chelicera ..		Basal	2.46	Second	2.68			5.14

Female. Similar in structure to male. Pedipalps smaller, but spines relatively stronger, two small tubercles immediately before mid-ventral tubercle of the femur of the pedipalp (Fig. 30).

Measurements

Scute Length 5.98 Width 5.00

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.28	0.62	2.07	1.19	1.89	2.29	1.32	10.66
Leg 2 ..	2.24	0.79	2.90	1.36	2.82	3.30	3.08	16.49
Leg 3 ..	1.89	0.70	2.20	1.10	1.98	2.64	1.36	11.87
Leg 4 ..	2.29	0.88	3.03	1.36	2.64	4.13	2.20	16.53
Pedipalp ..	—	0.84	1.92	1.30	2.14	—	1.11	7.31
Chelicera ..		Basal	2.15		Second	2.21		4.36

Types. This species was first described from specimens collected by Sehauinsland from Stephen Island during his expedition in the Pacific in 1897. Types in National Museum of Natural History, Paris.

Records. Stephen Island, May 19, 1950, R. R. Forster, 4 ♂, 6 ♀ (C.M.A. 71); January 16, 1922, R. J. Tillyard, 4 ♂, 5 ♀ (C.M.A. 544); January 11, 1922, R. J. Tillyard, 1 ♂, 2 ♀ (C.M., 2 704); November 19, 1950, D. Hurley, 1 imm. (C.M.A. 594); September 13, 1948, R. K. Dell, 1 imm. (C.M.2/745); Motuara Island, September 12, 1948, R. K. Dell, 1 ♀, 1 imm. (C.M.A. 548); same date, J. T. Salmon, 1 ♀, 1 imm. (C.M.2/737).

Remarks. Through the courtesy of Dr A. Kaestner of the Berlin Museum, I have been able to re-examine Loman's specimens, and there can be little doubt that *sperata* is identical with *obesa*.

Nuncia obesa magna n.s.sp.

Separated from the nominate form by its much larger size, as shown in table (p.111). Length of scute of male ranging from 6.7–7.8 mm. in contrast to a range of 5.2–6.1 for *obesa* and from 6.3–6.8 in contrast to 5.1–6.1 in the females.

Types. Holotype male and Allotype female, Canaan, West Nelson, November, 1951, A. C. O'Connor (C.M.A. 612); Paratypes. Canaan Track, October 25th, 1948, R. A. Cumber 2 ♂, 1 ♀ (C.M.A. 545); Kairuru, December, 1948, A. C. O'Connor, 1 ♂ (C.M.A. 546); Kairuru, December, 1951, A. C. O'Connor, 1 ♂ (C.M.A. 610).

Remarks. This form is separated from the nominate species entirely on size. It appears to be restricted to a very limited area and is isolated from the nominate species which is found to the east in the Maitai Valley as well as on Stephen Island.

Nuncia (Nuncia) obesa grimmetti n.s.sp.

Figs. 31–36

Male

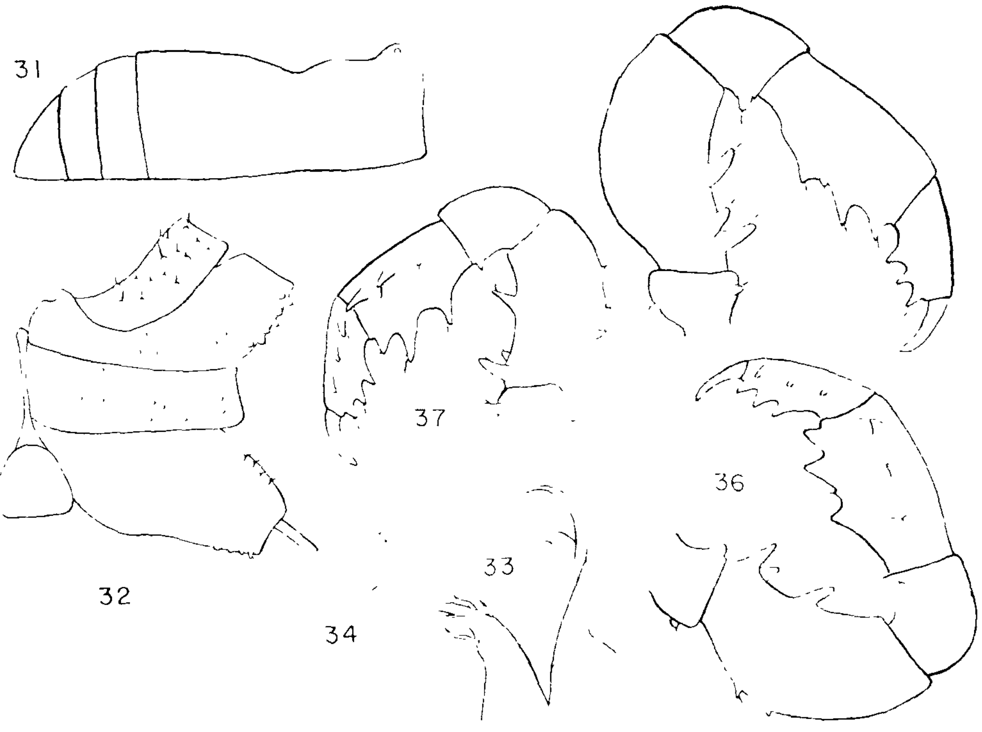
Colour. The ground colour of the scute is orange-yellow. Faint black reticulate markings cover the anterior corners of the cephalothorax and indistinct black bands extend down the median surface of the tergal region of the scute and each lateral margin to merge with a black band across the posterior margin. There-are rows of light orange spots distinguishing the five tergal areas of the scute, the first four rows being limited to the median surface. The free tergites are blackish. The sternites are deep orange with black shading. The pedipalps and chelicerae are light orange with black reticulate marking on the dorsal surfaces. Coxae of legs light orange, remaining segments with irregular black markings.

Body. Scute finely granulate. Eyemound rises sharply from the anterior margin of the carapace and slopes gently back (Fig. 31) twice as wide as high. Scutal groove visible only in the median region. Tergal region of the scute relatively low, rising only slightly higher than the cephalothorax. The free tergites each with a transverse row of small granules. Sternites smooth. Maxillary lobes of coxae 11 as in Fig. 32.

Genitalia. (Figs. 33, 34). General structure as in *obesa*, but anterior fold of velum evenly serrate, setae of ventral plates shorter, two superior, two inferior.

Pedipalps (Figs. 35, 36). There are two small tubercles on the ventral surface of the trochanter of the pedipalp and five on the dorsal surface. Dorsal surface of the femur with two teeth at one third of its length and a third at two-thirds. The ventral surface is armed with two proximal tubercles, one large, the other small, and a third large spinous tubercle near the mid-point. There is also a small tubercle on the distal pro-lateral surface. The tibia and tarsus are flattened beneath and provided with three tubercles on both pro- and retro-ventral surfaces.

Legs. All segments except tarsi and metatarsi sparsely granulate. Coxae as in Fig. 32. Coxa I with two large and a number of small tubercles on the ventral surface. One of the large tubercles is distal in position, the other at two-thirds of the length of the segment. Coxa II with a group of small tubercles on the distal half of the retro-lateral surface. Coxa III with a row of granules along the pro- and retro-ventral margins. Coxa IV with a few small rounded tubercles on the distal region of the pro-lateral surface and a uniform row along the retro-ventral margin above the spiracle. Tarsal segments 3.9-11.4.4. Distotarsi of legs 1 and 11, 2 and 3.



FIGS. 31-37 *Nuncia* (*Nuncia*) *obesa grimmetti* n.s.sp.
Fig. 31 Lateral view of body; Fig. 32 Coxal region of male; Fig. 33 Male genitalia; Fig. 34 Apical fold of velum; Fig. 35 Retro-ventral surface male pedipalp; Fig. 36 Pro-lateral surface male pedipalp; Fig. 37 Pro-lateral surface female pedipalp.

Measurements

Scute Length 4.67 Width 4.2

	Cox.	Troch	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.32	0.62	1.98	0.79	1.54	2.07	1.23	9.55
Leg 2 ..	2.16	0.66	2.71	1.23	2.51	3.04	2.33	14.04
Leg 3 ..	1.54	0.66	1.80	0.75	1.58	2.20	1.67	10.20
Leg 4 ..	1.89	0.84	3.04	1.32	2.42	3.52	2.07	15.10
Pedipalp ..		0.53	1.95	0.97	1.50		1.14	6.09
Chelicera ..	Basal	1.36	Second	1.85				3.21

Female. Very similar in appearance to the male. The pedipalps are smaller and the two proximo-ventral spines of the femur are both equally developed, not sub-equal as in the male (Fig. 37). The maxillary lobes of coxae II are sub-triangular. The tubercles on the coxae of the legs although similar in disposition are smaller.

Measurements

Scute Length 4.67 Width 3.99

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.88	0.48	1.84	0.92	1.45	1.76	1.14	8.47
Leg 2 ..	1.85	0.57	2.60	1.06	2.02	2.42	2.20	12.72
Leg 3 ..	1.41	0.48	1.84	0.88	1.32	1.76	1.50	9.19
Leg 4 ..	1.80	0.57	2.55	1.10	2.02	2.73	1.72	12.49
Pedipalp ..		0.44	1.51	0.66	1.10		0.92	4.63
Chelicera ..	Basal	1.19	Second	1.41				2.60

Types. Holotype male, Karori, Wellington, October 2, 1941, R. R. Forster (D.M. 2/193); Allotype female, same data (D.M.2/194); Paratypes: same data, 3 ♀, 1 imm.(D.M.2 195); 1 ♂, 1 ♀ (C.M.A. 75); Karori, December 6, 1941, R. R. Forster, 5 ♂, 5 ♀ (D.M.2/684), Karori, August 2, 1942, R. R. Forster, 5 ♂, 7 ♀, 7 imm. (D.M.2/682); Karori, April 26, 1946, R. R. Forster, 8 ♂, 9 ♀ (D.M.2/683).

Records

South Island. Island in Erie Bay, Tory Channel, October 11, 1948, R. K. Dell, 1 ♂ (D.M.2/708); Pickersgill Island, Queen Charlotte Sounds, June 25, 1950, R. K. Dell, 1 imm. (D.M.2/740); Ships Cove, Queen Charlotte Sounds, October 12, 1948, R. K. Dell, 1 ♂, 1 ♀ (D.M.2/707); Resolution Cove, Queen Charlotte Sounds, January 12, 1951, R. S. Allan, 1 ♀ (C.M.A. 628); Kaituna Valley, Banks Peninsula, September 11, 1949, R. R. Forster, 8 ♂, 10 ♀ (C.M.A. 84, 86 ,D.M.2/202); Mount Desmond, Akaroa, April 26, 1950, L. P. Hughson, 3 ♂, 3 ♀ (C.M.A. 519); Paua Bay, Akaroa, April 23, 1950, L. P. Hughson, 6 ♂, 5 ♀ (C.M.A. 524); Sleepy Cove, Akaroa, April 21, 1950, L. P. Hughson, 1 ♀, 1 ♂ (C.M.A. 526); Little Fishermans Bay, Akaroa, April 22, 1950, L. P. Hughson, 1 ♀, 1 ♂ (C.M.A. 515); Fishermans Bay, Akaroa, April 23, 1950, L. P. Hughson, 4 ♀, 2 ♂ (C.M.A. 527); Akaroa, October 14, 1949, R. R. Forster, 4 ♂, 8 ♀ (C.M.A. 514); Wainui, Banks Peninsula, August 31, 1946, E. W. Dawson, 3 ♂, 3 ♀ (C.M.A. 512); Governor's Bay, January 22, 1949, I. Cresswell, 2 ♀ (C.M.A. 513); Governor's Bay, April 24, 1949, E. W. Dawson, 1 ♂, 2 ♀ (C.M.A. 525); Port Levy, Pigeon Bay, April 22, 1950, J. Dugdale, 1 ♀ (C.M.A. 516); Charteris Bay, April 18, 1946, I. W. T. Munro, 3 ♀ (C.M.A. 521); Okuti Valley, December 10, 1950, R. R. Forster, 5 ♂, 6 ♀ (C.M.A. 609); Redcliffs, Christchurch, December 5, 1948, E. W. Dawson, 1 ♂, 2 ♀ (C.M.A. 694); Mount Pleasant, Christchurch, July 15, 1952, J. Dugdale, 1 ♂, 1 ♀ (C.M.A. 560); Kennedy's Bush, Christchurch, November 30, 1946, R. R. Forster, 5 ♂, 9 ♀ (D.M.2/706); Riccarton Bush, Christchurch, 1927, A. W. Parrott, 1 ♂, 1 ♀ (C.M.A. 558); Botanic Gardens, Christchurch, February 6, 1945, A. W. Parrott, 1 ♂, 2 ♀ (C.M.A. 520);

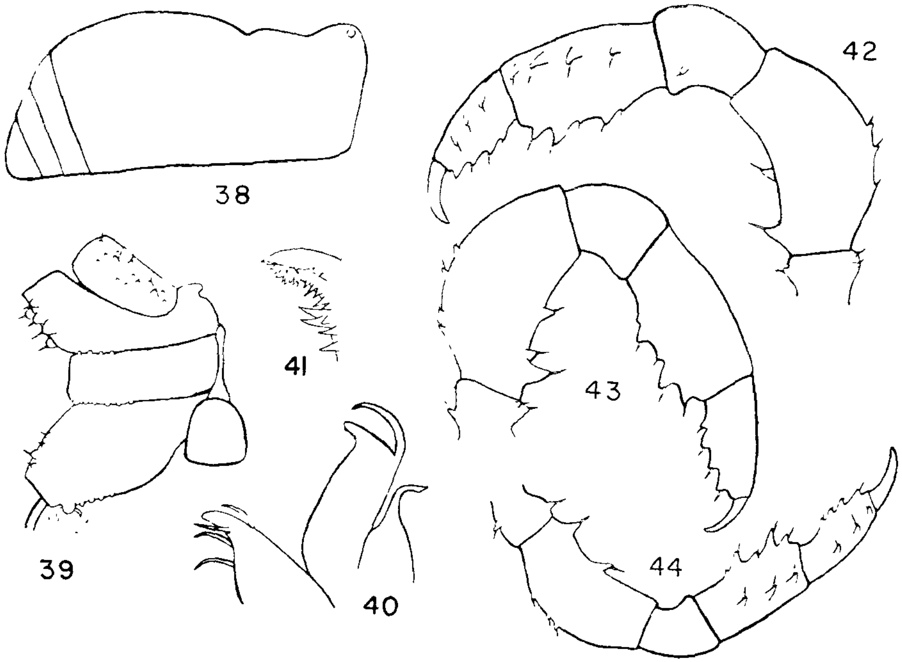
Kowhai Bush, Canterbury, May 8, 1952, J. Dugdale, 3 ♀, 5 ♂ (C.M.A. 552); Rangiora, November 1, 1941, D. Spiller, 1 ♀, 1 ♂ (D.M.2/711); Waipara River Bed, March 13, 1921, G. Archey, 1 ♂ (C.M.A. 517); Castle Hill, January 23, 1950, E. W. Dawson, 1 ♀ (C.M.A. 518); Lake Rubicon, November 19, 1950, R. R. Forster, 1 ♂, 1 ♀ (C.M.A. 607); Weka Pass, January 12, 1947, B. J. Marples, 1 ♀ (C.M.A. 677); Methven, August 27, 1950, R. A. Cranfield, 2 ♂, 7 ♀ (C.M.A. 523).

North Island. Botanic Gardens, Wellington, October 6, 1930, R. E. R. Grimmett, 3 ♂, 4 ♀ (D.M.2/693); King George V Park, Wellington, September 3, 1951, G. Ramsay, 3 ♂, 3 ♀ (C.M.A. 673); Island Bay, Wellington, November 21, 1920, R. E. R. Grimmett, 1 ♂, 3 ♀ (D.M.2/690); Lyall Bay, Wellington, October 20, 1942, R. R. Forster, 4 ♀ (D.M.2/694); Wiltons Bush, Wellington, March, 1921, R. E. R. Grimmett, 2 ♂, 4 ♀ (D.M.2/696); Wiltons Bush, September 8, 1946, G. Ramsay, 1 ♀ (D.M.2/697); Point Howard, Wellington, January, 21, 1949, J. C. Yaldwyn, 1 ♀ (C.M.A. 538); Mount Ross, South Wairarapa, April 5, 1947, R. R. Forster, 5 ♂, 4 ♀ (D.M.2/729); West Side, Lake Wairarapa, March, 1950, A. C. O'Connor, 3 ♂, 3 ♀ (C.M.A. 591); Rimutuka Range, August 10, 1942, R. R. Forster, 1 ♂, 3 ♀ (D.M.2/689); Orongorongo, December 6, 1920, R. E. R. Grimmett, 1 ♂, 4 ♀ (D.M.2/699); Pangaroa, November 17, 1946, J. H. Sorensen, 2 ♀ (D.M.2/749); Kaihinui, Tararua Range, June 19, 1950, R. K. Dell, 2 ♂, 2 ♀ (D.M.2/734); Kapiti Island, May 14, 1949, R. R. Forster, 1 ♂ (C.M.A. 667); Little Akatarawa, March 3, 1947, R. R. Forster, 1 ♂ (D.M.2/695); Akatarawa, January 2, 1943, R. R. Forster, 2 ♂, 3 ♀ (D.M.2/685); Waikanae, January 3, 1949, R. R. Forster, 4 ♂, 2 ♀ (D.M.2/681); Waikanae, February 4, 1943, R. R. Forster, 2 ♂ (D.M.2/691); Porirua, October 24, 1920, R. E. Grimmett, 1 ♂, 1 ♀ (D.M.2/698); Levin, June 6, 1948, R. R. Forster, 3 ♂, 4 ♀ (D.M.2/688); Feilding, December 26, 1948, R. R. Forster, 16 ♂, 15 ♀ (C.M.A. 536); Feilding, September 21, 1948, R. R. Forster, 4 ♀ (C.M.A. 537); Otane, Wanganui, September 28, 1949, A. C. O'Connor, 3 ♀, 2 imm. (C.M.A. 658); Westmere, Wanganui, December 12, 1948, J. M. Moreland, 5 ♂, 3 ♀ (C.M.A. 659); Aramoho, Wanganui, April 5, 1949, J. M. Moreland, 3 ♂, 3 ♀ (D.M.2/855); Stratford, November 28, 1950, T. E. Woodward, 3 ♂, 2 ♀; Wanganui, January 28, 1943, R. R. Forster, 1 ♀, 3 ♂ (D.M.2/856); Mount Egmont, January 11, 1950, T. E. Woodward, 1 ♀ (C.M.A. 630); Pahiatua Track, 1,100 feet, August 23, 1951, A. C. O'Connor, 4 ♂, 1 ♀ (C.M.A. 648); Pukeamaru, April, 1951, A. C. O'Connor, 2 ♂, 1 ♀ (C.M.A. 634); Pirangahea, Manawatu, January 29, 1951, T. E. Woodward, 1 ♂, 1 ♀ (C.M.A. 709); Rangataua, December 12, 1949, C. Rawlings, 1 ♀ (C.M.A. 727); Blyth Track, Ohakune, January 20, 1952, G. Ramsay, 2 ♂ (C.M.A. 723); Raetihi, December 23, 1948, R. R. Forster, 1 ♂ (C.M.A. 590); Paiaka, July 2, 1949, R. A. Cumber, 3 ♂ (C.M.A. 696); Waitakere Hills, Auckland, February 8, 1949, R. R. Forster, 1 ♀ (C.M.A. 597); Titirangi, Auckland, December 2, 1950, T. E. Woodward, 1 ♀ (C.M.A. 652).

Remarks. This widespread sub-species is separated from the nominate form by its smaller size and differences in the genitalia and pedipalps. I have named this form after Mr W. J. Phillipps of the Dominion Museum, Wellington, one of the pioneers in the study of Opiliones in New Zealand.

Nuncia (Nuncia) obesa rotunda n.s.sp.

This form is separated from *obesa grimmetti* by its smaller size (see Table p.000). Length of scute of male ranging from 3.7–4.3 mm., female from 3.6–3.9 mm. The tubercles on the ventral surface of the pedipalp femur of both male and female are relatively smaller than in *grimmetti*. The male genitalia is similar in structure but the teeth on the apical fold of the velum are much more strongly developed.



FIGS. 38-44 *Nuncia* (*Nuncia*) *obesa rotunda* n.s.sp.
Fig. 38 Lateral view of body; Fig. 39 Coxal region of male; Fig. 40 Male genitalia; Fig. 41 Apical fold of velum; Fig. 42 Pro-lateral surface male pedipalp; Fig. 43 Retro-lateral surface male pedipalp; Fig. 44 Pro-lateral surface female pedipalp.

Types. Holotype male, Peel Forest, December 9, 1949, R. R. Forster (C.M.A. 90); Allotype female, same data (C.M.A. 91); Paratypes: Peel Forest, December 9, 1949, R. R. Forster, 1 ♂, 1 ♀ (D.M.2/204); same locality, January 20, 1951, R. R. Forster, 3 ♂ (C.M.A. 642); Kakahu, Geraldine, April 30, 1950, R. R. Forster, 6 ♂, 10 ♀ (C.M.A. 549); Geraldine, December 11, 1939, A. W. Parrott, 4 ♀ (C.M.A. 550).

Remarks. This form is found to the south of the Rangitata River, an area which supports a fauna which is closely related to, but distinct from, that found to the north.

Nuncia (Nuncia) oconnori n.sp.

Figs. 45–48

Male

Colour. Ground colour orange-brown, with an hour-glass shaped band down the median surface of the scute, free tergites with blackish shading on the anterior surface.

Body. The scute is coriaceous, with four pairs of small denticulate tubercles on the median surface of the tergal region. The eyemound slopes steeply up from the anterior margin of the carapace to a minute apical tubercle above the eyes but slopes gently back behind the eyes (Fig. 45). Scutal groove prominent. Free tergites finely coriaceous and lacking tubercles. Maxillary lobes of coxa 2 smooth.

Genitalia. As shown in Fig. 47. The single superior seta is almost twice the length of the three inferior setae.

Chelicerae. Basal segment with a shallow proximo-dorsal furrow, beyond which are five small denticulate tubercles; inner disto-dorsal surface produced forward into a small lobe and armed with two small tubercles. Second segment with two strong teeth on the dorsal surface.

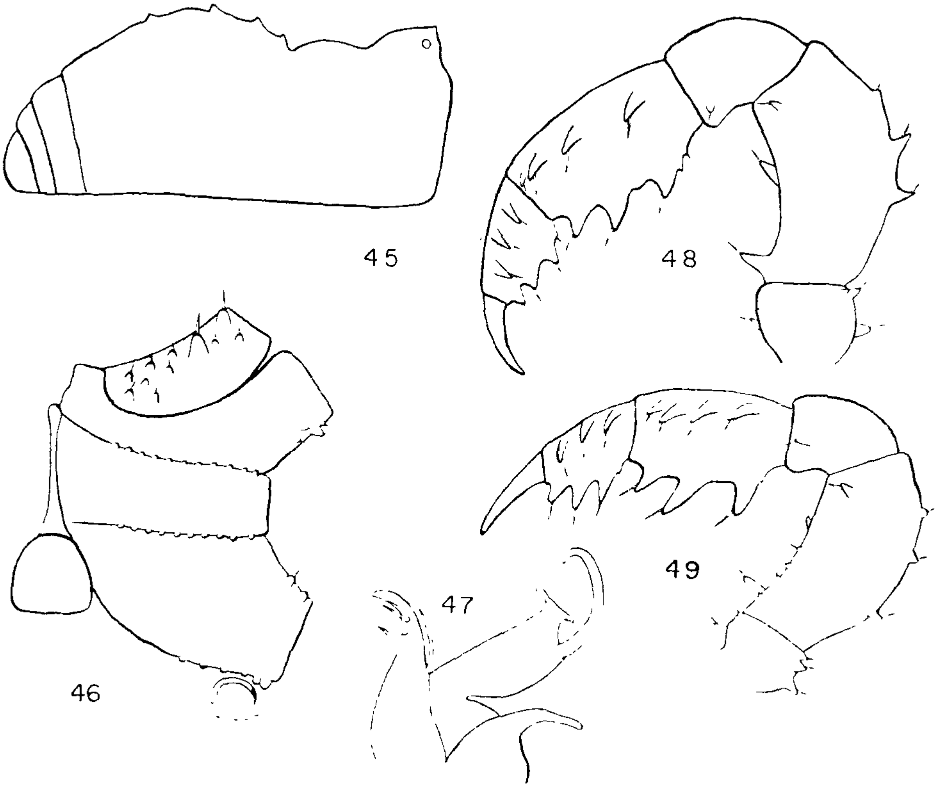
Pedipalps (Figs. 48). Trochanter with a tubercle on the mid-dorsal and mid-ventral surfaces and two smaller tubercles on the disto-dorsal surface. Femur with three denticulate tubercles on the dorsal surface and a strong spiniform tubercle on the proximo-ventral and mid-ventral surfaces. Tibia with four spiniform tubercles on the pro-ventral and three on the retro-ventral surfaces. Tarsus with three similar tubercles on both pro- and retro-ventral surfaces.

Legs. Coxae as in Fig. 46. Legs smooth. Tarsal formula 3.11–13.4.4.

Measurements

Scute Length 5.23 Width 4.27

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.10	0.44	2.16	0.97	1.67	2.20	1.54	10.08
Leg 2 ..	1.98	0.62	3.26	1.32	2.73	2.95	3.21	16.07
Leg 3 ..	1.72	0.66	2.03	1.01	1.76	2.46	1.63	11.27
Leg 4 ..	2.33	0.75	3.04	1.28	2.51	3.92	1.80	15.63
Pedipalp ..		0.48	1.80	0.88	1.50		1.19	5.85
Chelicera ..	Basal	1.76	Second	2.20				



FIGS. 45-49 *Nuncia (Nuncia) oconnori* n.sp.
Fig. 45 Lateral view of body, Fig. 46 Coxal region of male; Fig. 47 Male genitalia; Fig. 48 Pro-lateral surface of male pedipalp; Fig. 49 Pro-lateral surface of female pedipalp.

Female. Similar in structure to male. Pedipalps smaller and with a row of four to five setose pustules along the proximal half of the pro-ventral surface of the tibia. Disposition of spiniform tubercles of tibia and tarsus similar to male, but tubercles relatively stronger (Fig. 49).

Measurements

Scute Length 5.23 Width 4.79

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.14	0.44	2.16	0.88	1.58	2.02	1.10	9.32
Leg 2 ..	2.20	0.70	2.64	1.28	2.60	3.08	2.82	15.32
Leg 3 ..	1.63	0.66	1.85	0.88	1.63	2.16	1.41	10.22
Leg 4 ..	2.20	0.66	2.64	1.28	2.29	3.52	1.76	14.35
Pedipalp ..		0.48	1.76	0.70	1.28		0.97	5.19
Chelicera ..	Basal	1.10	Second	2.11				3.21

Types. Holotype male, Oruru Bay, Whatawhiwhi, January 29, 1950, A. C. O'Connor (C.M.A. 81); Allotype female, same data (C.M.A. 82); Paratypes: same data, 1 ♂, 5 ♀ (C.M.A. 83); same data, 1 ♂, 1 ♀ (D.M.2/201).

Records. Kohuionuku, North Auckland, January 21, 1950, A. C. O'Connor, 4 ♂, 3 ♀ (C.M.A. 542); 5 miles south of North Cape, January 29, 1950, A. C. O'Connor, 7 ♂, 3 ♀ (C.M.A. 543); Spirits Bay, North Auckland, January 25, 1950, A. C. O'Connor, 1 ♀ (C.M.A. 635); Pandora, Spirits Bay, data and collector unknown, 1 ♂ (D.M.2/864).

Remarks. This species is limited to the North Cape district. The presence of small tubercles on the scute immediately separates it from the *obesa* group. The species is named after the late Mr A. C. O'Connor who collected large numbers of harvestmen for the author.

Nuncia (Nuncia) oconnori conocula n.s.sp.

Figs. 50–55

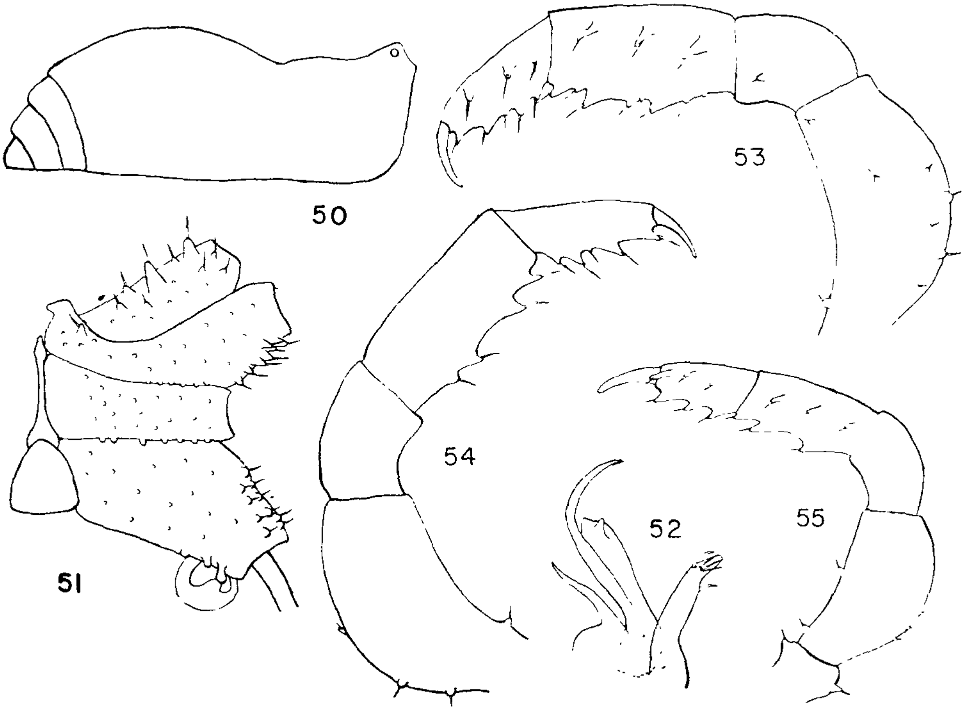
Male

Colour. General body colour deep orange-brown. The surface of the carapace immediately behind the eyemound is suffused with black which extends along the tergal region as a black band. The lateral margins of the cephalothorax are covered with black reticulate markings which extend back along each lateral margin of the tergal region as an irregular black band. The free tergites are greyish-black. The sternites are orange with a few small black markings. The dorsal surfaces of the pedipalps and chelicerae and the ventral surface of coxae I–IV are covered with faint black reticulate markings. Legs light yellow with a few irregular black patches.

Body. The scute and free tergites are closely and coarsely granulate—almost coriaceous. The eyemound is sharply conical, sloping up steeply from the anterior margin of the carapace and more gently down the posterior surface. It is wider than high in the proportion of 10:7. There is a pronounced groove separating the carapace from the tergal region of the scute. The tergal region is evenly rounded and when viewed in profile (Fig. 50) is seen to rise much above the level of the cephalo-thorax. The sternites are smooth. The maxillary lobes of coxae II are as in Fig. 51 projecting forward on the inner margin as a flattened plate, notched on the inner surface.

Genitalia. (Fig. 25). The aedeagus is similar in structure to *obesa*. The superior seta of the ventral plate is relatively shorter than *obesa*, but is inserted more anteriorly so that it extends to the distal extremity of the plate.

Chelicerae. Both segments are smooth.



FIGS. 50-55 *Nuncia* (*Nuncia*) *oconnori conocula* n.s.sp.
Fig. 50 Lateral view of body; Fig. 51 Coxal region of male; Fig. 52 Male genitalia; Fig. 53 Pro-lateral surface male pedipalp; Fig. 54 Retro-lateral surface male pedipalp; Fig. 55 Pro-lateral surface female pedipalp.

Pedipalps (Figs. 53, 54). The trochanter is provided with a strong ventral spine and a group of three small spines on the dorsal surface. There are five small round tubercles on the proximal half of the dorsal surface of the femur; a single rounded tubercle on the proximo-ventral surface, and two similar tubercles on the prolateral surface, one median and the other distal. The patella is smooth apart from a small prolateral tubercle. The tibia and tarsus are flattened beneath. There are four main tubercles on the proventral surfaces of both the tibia and tarsus and three on the retroventral surfaces.

Legs. All segments other than coxae and trochantera smooth. Coxae as in Fig. 51. In addition to a number of small tubercles there are two large conical tubercles, one median on the ventral surface of coxa 1, the other distal. Distal portion of the retro-lateral surface of coxa 11 with a group of conical tubercles. There is a row of granules along both pro and retro-ventral margins of coxa 111. The distal half of the pro-lateral surface of coxa 1V is covered with small rounded tubercles. There are three tubercles on the distal surface of the retro-ventral margin above the spiracle. Tarsal segments 3, 10, 4, 4.

Measurements.

	Scute	Length 4.57		Width 3.87				
	Cox.	Troch	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.28	0.53	2.28	0.93	1.76	2.20	1.41	10.39
Leg 2 ..	2.16	0.66	3.08	1.36	2.73	3.21	3.21	16.31

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 3 ..	1.54	0.62	1.98	0.84	1.76	2.42	1.76	10.92
Leg 4 ..	2.11	0.84	2.86	1.32	2.51	3.78	2.29	15.71
Pedipalp ..		0.48	2.07	0.88	1.54		1.23	6.20
Chelicera ..	Basal	1.63	Second	1.98				3.61

Female. Differing from the male as follows: The tubercles on the coxae are disposed as in the male but smaller. The maxillary lobes of coxae are present as small subtriangular plates. The pedipalps are much smaller. There is an additional tubercle on the mid-ventral surface of the femur. The tibia and tarsi of the pedipalps have three spines on both pro- and retro-ventral surfaces: (Fig. 55).

Measurements.

Scute Length 3.92 Width 3.92

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.10	0.44	1.67	0.88	1.50	1.80	1.19	8.58
Leg 2 ..	1.76	0.44	2.29	0.97	2.42	2.73	1.85	12.46
Leg 3 ..	1.36	0.53	1.85	0.79	1.36	2.02	1.41	9.32
Leg 4 ..	1.80	0.66	2.55	1.14	2.16	3.12	1.80	13.23
Pedipalp ..		0.35	1.19	0.70	1.10		0.88	4.22
Chelicera ..	Basal	1.14	Second	1.58				2.72

Types. Holotype male, Waikaremoana, December 13, 1946, R. R. Forster (D.M. 2/208); Allotype female, same data (D.M. 2/209); Paratype, same data, 1 imm. (C.M.A. 96).

Remarks. The absence of paired tubercles immediately separates this sub-species from *oconnori*, although these tubercles are visible in immature specimens. The most striking difference is shown in the poor development of the tubercles of the pedipalp which gives rise to the thought that the male described above may be of 'Form A', a question which will not be finally settled until further material can be obtained.

Nuncia (Nuncia) paucispinosa n.sp.

Figs. 56–63

Male Form A.

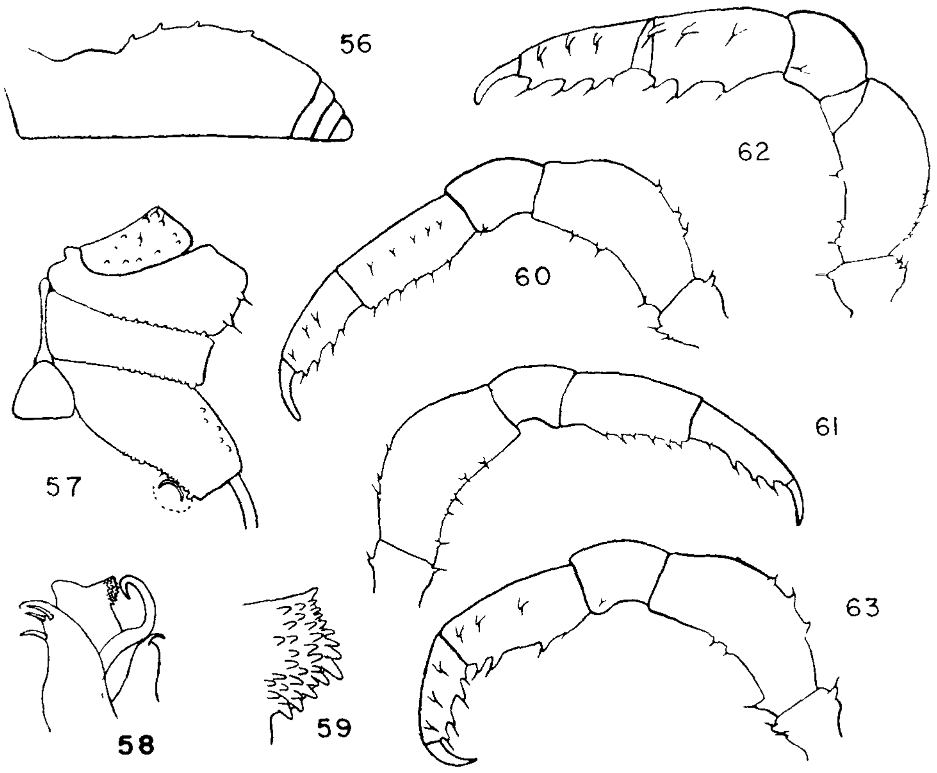
Colour. General colour orange-brown. The dorsal surfaces with black reticulate markings.

Body. The eyemound rises from immediately behind the anterior margin of the carapace, sub-conical with a small apical tubercle, wider than high in the ratio of 12:7. The entire scute is strongly coriaceous. Scutal groove deep, tergal area rounded, rising well above the carapace, provided with four median pairs of prominent dentiform tubercles (Fig. 56). The maxillary lobes of coxae 2 are simple as shown in Fig. 57.

Genitalia. (Fig. 58). Aedeagus relatively short and apical portion strongly bent, inner distal margin of sheath strongly denticulate (Fig. 59). Ventral plates with short setae, one superior, two inferior.

Chelicerae. Basal segment slender and smooth, with a shallow proximo-dorsal groove. Second segment with from 2–3 small tubercles on the dorsal surface.

Pedipalps (Figs. 60, 61). Small. Trochanter with two dorsal and three ventral tubercles. Femur is provided with three small tubercles on both dorsal and ventral surface, dorsal tubercles grouped immediately behind the mid surface; ventral surface with one proximal, two median. The tibia is slender with a row of minute



FIGS. 56-63 *Nuncia* (*Nuncia*) *paucispinosa* n.sp.
Fig. 56 Lateral view of body; Fig. 57 Coxal region of male; Fig. 58 Male genitalia; Fig. 59 Apical fold of velum; Fig. 60 Pro-lateral surface of male pedipalp (Form A); Fig. 61 Retro-lateral surface of male pedipalp (Form A); Fig. 62 Pro-lateral surface male pedipalp (Form B); Fig. 63 Pro-lateral surface female pedipalp.

rounded tubercles on both ventral margins. Tarsus with three small pro-ventral tubercles, four retro-ventral.

Legs. The coxae are as shown in Fig. 57. There are a few small tubercles on the ventral surface of coxa 1, two on the retro-lateral surface of coxa 2 and a few granules on the pro-lateral surface of coxa 4. Tarsal formula 3, 9–10, 4, 4.

Measurements.

	Scute	Length 4.13		Width 3.48				
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.92	0.44	1.58	0.84	1.45	1.58	1.28	8.09
Leg 2 ..	1.58	0.66	2.68	0.92	1.94	2.33	2.51	12.62
Leg 3 ..	1.36	0.48	1.72	0.70	1.32	1.45	1.23	8.26
Leg 4 ..	1.76	0.75	2.16	0.92	1.76	2.82	1.80	11.97
Pedipalp ..		0.44	1.36	0.66	1.10		0.75	4.31
Chelicera ..	Basal	1.14	Second	1.54				2.68

Male Form B.

Differing from Form A in that there are three spinous tubercles on both pro- and retro-ventral margins of the tibia of the pedipalp, as shown in Fig. 62. Three tubercles on the ventral surface of the femur, two proximal, one median; there are four small tubercles on the dorsal surface.

Measurements.

Scute Length 3.92 Width 3.30

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.97	0.44	1.67	0.88	1.45	1.80	1.32	8.53
Leg 2 ..	1.45	0.66	2.68	1.14	2.20	2.68	2.64	13.45
Leg 3 ..	1.32	0.62	1.76	0.57	1.36	1.76	1.58	8.97
Leg 4 ..	1.80	0.66	2.42	0.97	2.20	2.77	1.80	12.62
Pedipalp ..		0.40	1.41	0.57	1.32		0.88	4.58
Chelicera ..	Basal	1.32	Second	1.80				3.12

Female. Larger than male, but similar in general structure. The structure of the pedipalp approaches that of the Form B male (Fig. 63).

Measurements.

Scute Length 4.61 Width 4.13

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.14	0.53	1.63	0.79	1.36	1.80	1.32	8.77
Leg 2 ..	1.85	0.70	2.60	1.10	1.98	1.98	2.60	12.81
Leg 3 ..	1.45	0.53	1.63	0.62	1.36	1.76	1.50	8.85
Leg 4 ..	1.89	0.66	2.51	0.92	1.80	2.99	2.02	12.79
Pedipalp ..		0.44	1.41	0.70	1.01		0.79	4.35
Chelicera ..	Basal	1.28	Second	1.63				2.91

Types. Holotype male (A), Paihia, North Auckland, December, 1948, R. A.Cumber, (C.M.A. 54); Allotype female, same data, (C.M.A. 55).

Records. Taipa, January 24, 1950, A. C. O'Connor, 2 ♂ (B) (C.M.A. 56); Waipoua, November 30, 1949, N. M. Wilson, 2 ♂ (B); (C.M.A. 644); Whaka State Forest, August, 1950, C. Rawlings, 1 ♀ (C.M.A. 647); Whangarei, December, 1948, R. A. Cumber, 1 ♀, 1 imm. (C.M.A. 705); Waitakere Hills, June 10, 1943, R. R. Forster, 1 ♀ (D.M. 2/180); Titirangi, December 12, 1943, R. R. Forster, 2 ♀ (D.M. 2/765); Wawaka Gorge, near Opotiki, January, 1951, D. Hurley, 1 ♀ (C.M.A. 655); Kopuapounamu River, 1,400 feet, December, 1950, R. K. Dell, J. M. Moreland, 1 ♀ (D.M. 2/768); Pukeamaru Range, December, 1950, R. K. Dell, J. M. Moreland, 1 ♀ (D.M. 2/770-); Te Araroa, December, 1950, R. K. Dell, J. M. Moreland, 2 ♂ (B), 1 ♀ (D.M. 2/769).

Nuncia (Nuncia) oconnori kopua n.s.sp.

Figs. 64–66

Male.

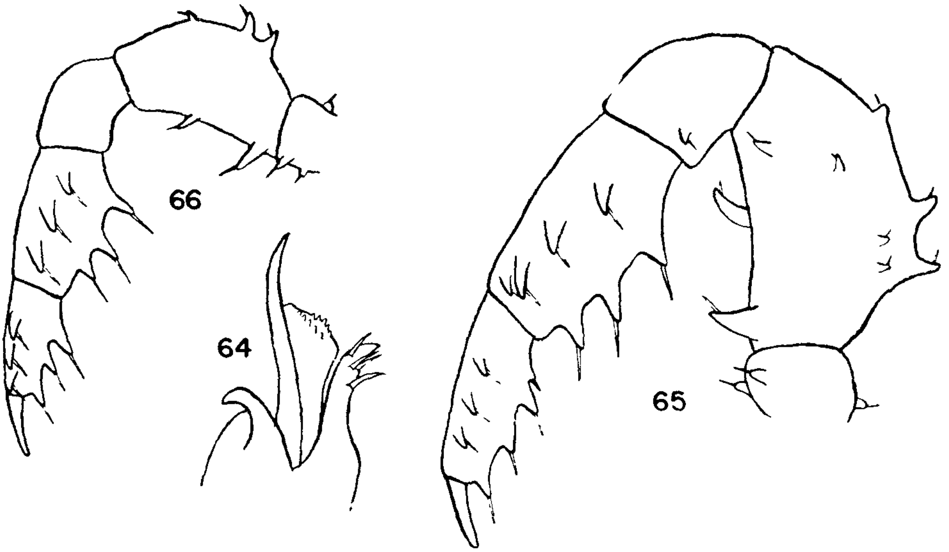
Colour. As in *oconnori.*

Body. The scute is similar to *oconnori* with four median pairs of small tubercles, but the eyemound is more evenly rounded. There is a small secondary process on the maxillary lobes of coxae 2.

Genitalia. As shown in Fig. 64. The aedeagus is almost straight. Ventral plate with one superior seta, which extends to beyond the plate and three inferior.

Chelicerae. As in *oconnori.* with a strong tubercle on the mid-dorsal surface of the second segment.

Pedipalps. Similar in structure with *oconnori* but femur stouter and spines relatively stronger. (Fig. 65.)



FIGS. 64-66 *Nuncia* (*Nuncia*) *oconnori kopua* n.s.sp.
Fig. 64 Male genitalia; Fig. 65 Pro-lateral surface male pedipalp; Fig. 66 Pro-lateral surface female pedipalp.

Legs. As in *oconnori.* Tarsal formula 3.15, 4, 4.

Measurements. Scute Length 6.13 Width 5.81

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.75	0.55	2.63	1.33	2.05	2.63	1.73	12.67
Leg 2 ..	2.75	0.78	3.88	1.75	3.25	4.00	3.75	20.16
Leg 3 ..	2.00	0.81	2.50	1.25	2.02	2.88	2.00	13.46
Leg 4 ..	2.75	1.00	3.75	1.50	2.90	4.37	2.58	18.85
Pedipalps		0.78	2.63	1.13	2.28		1.50	8.32
Chelicera ..	Basal	2.50	Second	3.50				6.00

Female. Smaller than male, scute more strongly coriaceous. Second segment of chelicera without a strong tubercle. Pedipalps as shown in Fig. 66.

Measurements. Scute Length 4.75 Width 5.00

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.25	0.45	1.65	1.00	1.63	1.90	1.13	9.01
Leg 2 ..	1.88	0.50	2.50	1.25	2.30	2.75	2.87	14.05
Leg 3 ..	1.55	0.58	1.68	0.90	1.65	2.13	1.38	9.87
Leg 4 ..	2.50	0.58	2.50	1.25	2.38	3.00	1.90	14.11
Pedipalp ..		0.55	1.50	0.75	1.25		1.25	5.30
Chelicera ..	Basal	1.30	Second	2.00				3.30

Types. Holotype male, Kopuapounamu Range, 1,400 feet, East Cape, December, 1950, R. K. Dell, J. M. Moreland (D.M. 2/771); Allotype female, same data (D.M. 2/772). Paratypes, same data, 1 ♀ (D.M. 2/773); Pukeamaru, December, 1950, R. K. Dell, J. M. Moreland, 1 imm. (D.M. 2/774).

Remarks. This localised sub-species is closely related to *oconnori*, separated from it by the larger size of the male, the more rounded eye-mound, and the stronger pedipalp femur.

Nuncia (Nuncia) sulcata n.sp.

Figs. 67–72

Male.

Colour. Scute with a broad median longitudinal black band and two lateral bands which merge posteriorly to enclose two conspicuous large oval, reddish-brown patches, one on each side of the middle line. There are four pairs of small orange patches lateral to the median band and also a row of similar patches extending across the posterior margins of the scute and free tergites. Dorsal surfaces of chelicerae and pedipalps with black reticulate markings.

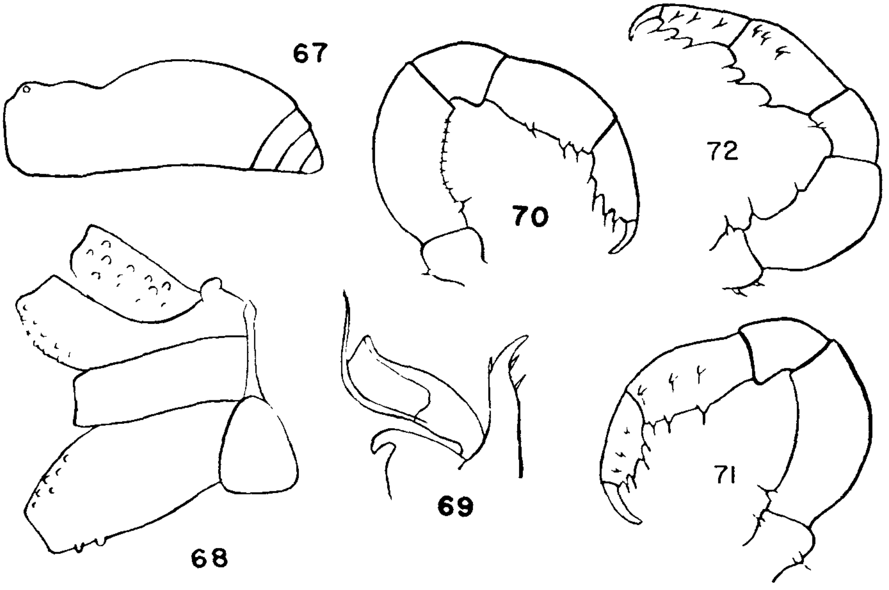
Body. The scute is coriaceous. Both scute and free tergites lack tubercles. The eyemound is low, and rounded, the width at the base is equal to four times the height of the eyemound. The scutal groove is deep. The tergal region is evenly rounded and rises well above the level of the carapace (Fig. 67). The maxillary lobes of coxae 2 possess a small secondary process (Fig. 68).

Genitalia. As shown in Fig. 69. Aedeagus typical, velum without teeth. Ventral plates with three small setae, one superior, two inferior.

Chelicerae. Basal segment stout, with a shallow proximo-dorsal groove and a small disto-dorsal tubercle. Second segment with a few small tubercles on the dorsal surface.

Pedipalps (Figs. 70, 71). Trochanter with a small tubercle on both dorsal and ventral surfaces. Dorsal surface of femur smooth with small rounded proximo-ventral tubercle and row of setose pustules along the retro-ventral surface. Tibia with three small tubercles on both pro- and retro-ventral surfaces. Tarsus with three proventral and four small retro-ventral tubercles.

Legs. Group of small rounded tubercles on the distal retro-lateral surface of coxa 2;



FIGS. 67-72 *Nuncia* (*Nuncia*) *sulcata* n.sp.
Fig. 67 Lateral view of body; Fig. 68 Coxal region of male; Fig. 69 Male genitalia; Fig. 70 Retro-lateral surface of male pedipalp; Fig. 71 Pro-lateral surface of male pedipalp; Fig. 72 Pro-lateral surface of female pedipalp.

prolateral surface of coxa 4 smooth (Fig. 68). Legs smooth apart from a few small granules. Tarsal formula 3.5–9, 4, 4.

Measurements.

	Scute	Length 3.78		Width 2.95				
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.92	0.40	1.32	0.62	1.01	1.14	0.92	6.33
Leg 2 ..	1.19	0.44	1.58	0.79	1.36	1.45	1.54	8.35
Leg 3 ..	1.01	0.35	1.10	0.84	0.92	0.92	0.75	5.89
Leg 4 ..	1.41	0.48	1.41	0.70	1.36	1.85	1.19	8.40
Pedipalp ..		0.31	1.54	0.53	1.01		0.79	4.18
Chelicera ..	Basal	1.10	Second	1.50				2.60

Female. Similar in structure to male. Pedipalp differing slightly in that there is a small tubercle on the mid-ventral surface of the femur, only three tubercles on the retro-ventral surface of the tarsus (Fig. 72).

Measurements.

	Scute	Length 4.13		Width 3.26				
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.97	0.40	1.32	0.66	0.97	1.01	0.92	6.25
Leg 2 ..	1.41	0.44	1.76	0.79	1.32	1.54	1.54	8.80
Leg 3 ..	1.10	0.44	1.36	0.48	0.88	0.97	0.92	6.15
Leg 4 ..	1.54	0.53	1.63	0.88	1.19	1.98	1.14	8.89
Pedipalp ..		0.44	1.23	0.44	0.84		0.53	3.48
Chelicera ..	Basal	0.97	Second	1.36				2.33

Types. Holotype male, Titirangi, March 10, 1949, R. R. Forster (C.M.A. 72); Allotype female, Kaiwaka, December, 1948, R. A. Cumber (C.M.A. 73); Paratypes, Paihia, January, 1949, R. A. Cumber, 2 ♂, 2 imm. (C.M.A. 74), (D.M. 2/192).

Records. Kopuapounamu Range, 1,400 feet, East Cape, December, 1948, R. K. Dell, J. M. Moreland, 1 ♂, 2 ♀ (D.M. 2/767).

Nuncia (Nuncia) heteromorpha n.sp.

Figs. 73–79

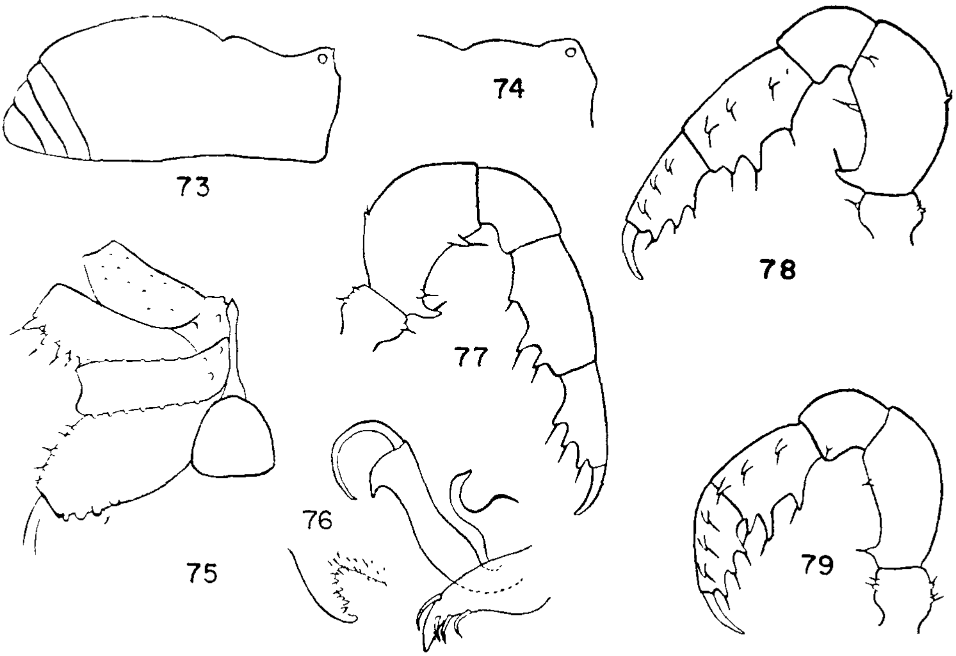
Male.

Colour. The ground colour of the scute is orange-brown, with a pair of dark median patches behind the eyemound, followed by a black band which extends down the median surface to merge posteriorly with similar bands which extend down the lateral margins. Ventral surface of coxae 1–4 and dorsal surfaces of chelicerae and pedipalps with black reticulate markings.

Body. Cephalothoracic carapace coriaceous, but tergal region of scute finely granulate. The eyemound is as high as it is wide at the base, sloping steeply up from the anterior margin of the carapace to a short apical tubercle (Fig. 73). The scutal groove is narrow and does not extend to the lateral margins. The tergal region of the scute is somewhat rounded, rising higher than the carapace. The maxillary lobes of coxae II with two small tubercles. Genital operculum conspicuously large: (Fig. 75).

Genitalia (Fig. 76). Ventral plates each with 4 setae; the single superior seta almost twice as long as three inferior.

Chelicerae. Basal segment not constricted proximally, but with a smooth, rounded projection on the inner disto-dorsal surface. Second segment with a few small tubercles on the dorsal surface.



FIGS. 73-79 *Nuncia (Nuncia) heteromorpha* n.sp.
Fig. 73 Lateral view of body of male; Fig. 74 Carapace and eyemound of female; Fig. 75 Coxal region of male; Fig. 76 Male genitalia; Fig. 77 Retro-lateral surface of male pedipalp; Fig. 78 Pro-lateral surface of female pedipalp; Fig. 79 Pro-lateral surface of female pedipalp.

Pedipalps (Figs. 77, 78). Trochanter with a pair of small tubercles on both dorsal and ventral surfaces. Femur with a single small tubercle on the dorsal surface near the median surface, two spinous tubercles, one proximal, on the ventral surface, one median, and a small rounded tubercle on the proximo-ventral and distal prolateral surfaces. Patella smooth apart from small distal prolateral tubercle. Tibia and tarsus flattened below, with three spinous tubercles on both pro- and retro-ventral surfaces.

Legs. Tubercles and granules disposed on coxae, as shown in Fig. 75. Remaining segments of legs smooth. Tarsal formula 3, 9–10, 4, 4.

Measurements.

	Scute	Length 4.09		Width 3.34				
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.70	0.44	1.58	0.79	1.23	1.54	1.10	7.38
Leg 2 ..	1.63	0.53	2.29	1.01	1.80	2.20	1.98	11.44
Leg 3 ..	1.32	0.62	1.54	0.66	1.19	1.67	1.32	8.32
Leg 4 ..	1.89	0.53	1.85	1.06	1.80	2.33	1.50	10.96
Pedipalp ..		0.31	1.19	0.57	1.06		0.84	3.97
Chelicera ..	Basal	1.10	Second	1.54				2.64

Female. Similar in general appearance to male but differing as follows: The eyemound is lower, wider than high in the ratio of 12:5, and lacks apical tubercle (Fig. 74). Both segments of the chelicerae are much stouter and there is a distinct depression of the proximo-dorsal surface of the basal segment. The femur of the pedipalp is more slender and the ventral tubercles are reduced in size, the mid-ventral being a small rounded tubercle (Fig. 79).

Measurements.

	Scute	Length 4.13		Width 3.74				
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.70	0.44	1.36	0.75	1.10	1.19	0.88	6.42
Leg 2 ..	1.54	0.44	1.89	0.88	1.54	1.67	1.98	9.94
Leg 3 ..	1.14	0.48	1.32	0.66	1.14	1.36	1.19	7.29
Leg 4 ..	1.67	0.57	1.94	0.88	1.76	2.38	1.54	10.74
Pedipalp ..		0.31	1.07	0.48	0.92		0.79	3.57
Chelicera ..	Basal	0.88	Second	1.45				2.33

Types. Holotype male, South Terrace, Karamea, January 20, 1950, R. R. Forster, (C.M.A. 99); Allotype female, same data (C.M.A. 100); Paratypes, same data, 20 ♂, 28 ♀, (C.M.A. 101, D.M. 2/210).

Records. Oparara, Karamea, January 18, 1950, R. R. Forster, 1 ♂ (C.M.A. 530); Karamea Bluff, April 22, 1948, A. C. O'Connor, 1 ♂, 14 ♀ (D.M. 2/680); Karamea Bluff, January 20, 1950, R. R. Forster, 2 ♂, 1 ♀ (C.M.A. 509); Mount Arthur Tableland District: Flora Saddle, 3,200 feet, February 22, 1946, J. T. Salmon, 1 ♂ (D.M. 2/634); Flora Track, April 5, 1946, R. R. Forster, 1 ♂, 1 ♀ (D.M. 2/638); Flora Hut, January 21, 1948, R. R. Forster, 1 ♂ (D.M. 2/635); Mount Arthur Track, January 22, 1948, R. R. Forster, 1 ♀, 14 ♂ (D.M. 2/863), Salisbury Hut, January 23, 1949, R. K. Dell, 2 ♀, 2 ♂ (D.M. 2/644); Leslie Valley Track, January 26, 1949, 3 ♂, R. R. Forster (D.M.2/646); Mount Balloon, January 26, 1948, R. K. Dell, 1 immature (D.M. 2/643); Canaan, November, 1951, A. C. O'Connor, 5 ♀, 2 ♂ (C.M.A. 615); Canaan, January, 1949, A. C. O'Connor, 5 ♀, 2 ♂ (C.M.A. 615); Canaan, January, 1949, A. C. O'Connor, 1 ♀ (C.M.A. 508); Bainham, February, 1949, A. C. O'Connor, 1 ♀, 1 ♂ (C.M.A. 528); Kairuru, Motueka, December 14, 1948, A. C. O'Connor, 13 ♀, 11 ♂ (C.M.A. 504); Riwaka, January, 1949, A. C. O'Connor, 1 ♂ (C.M.A. 505); Tororari, March, 1948, A. C. O'Connor, 1 ♀ (C.M.A. 502); Seddonville, February, 1951, A. C. O'Connor, 1 ♀ (C.M.A. 679); Westport, January 12, 1949, A. C. O'Connor, 1 ♀ (C.M.A. 529); Lower Fletcher Creek, Inangahua, January 17, 1952, W. Clark, 1 ♀ (C.M.A. 613); Blackball, April 10, 1950, L. P. Hughson, 1 ♂ (C.M.A. 511); Bullock Creek, Punakaiki, January 18, 1950, R. R. Forster, 1 ♀, 1 ♂ (C.M.A. 510); 12-mile, Greymouth, January 20, 1950, R. R. Forster, 1 ♂ (C.M.A. 513); Mount Davie, near Greymouth, January 24, 1950, R. R. Forster, 1 ♂ (C.M.A. 679); Greymouth, March 5, 1949, L. P. Hughson, 1 ♀ (C.M.A. 583); Greymouth, March, 1949, A. C. O'Connor, 1 ♂ (C.M.A. 506); Moana, March 10, 1950, R. R. Forster, 1 ♀ (C.M.A. 533); Otira, March, 1945, T. P. Harris, 1 ♂ (C.M.A. 532); Lake Kanieri, January 1, 1950, J. H. Sorensen, 1 ♂ (C.M.A. 507).

Remarks. This species appears to be most closely related to *obesa grimmetti*. It is restricted to the northern half of the West Coast of the South Island from Lake Kanieri in the south to the Nelson district in the north.

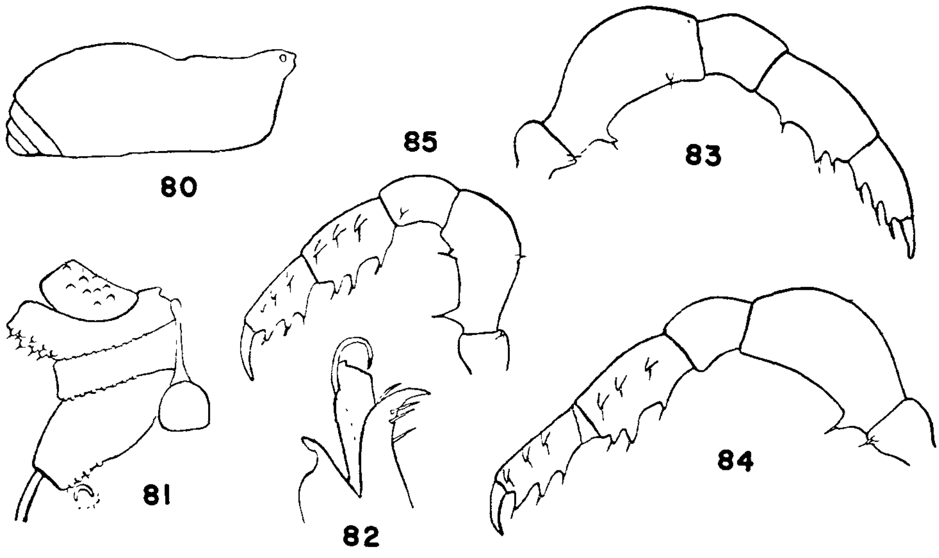
Nuncia (Nuncia) heteromorpha prolobula n.s.sp.

Figs. 80–85

Male.

Colour. Similar to *heteromorpha*.

Body. The scute and free tergites are finely coriaceous. The eyemound is directed forward beyond the anterior margin of the carapace and is provided with a small



Figs. 80-85 *Nuncia* (*Nuncia*) *heteromorpha prolobula* n.s.sp.
Fig. 80 Lateral view of body; Fig. 81 Coxal region of male; Fig. 82 Male genitalia; Fig. 83 Retro-lateral surface of male pedipalp; Fig. 84 Pro-lateral surface of male pedipalp; Fig. 85 Pro-lateral surface of female pedipalp.

rounded apical tubercle (Fig. 80). The scutal groove is narrow and does not extend to the lateral margins. Carapace and tergal regions of the scute as in *heteromorpha.* The maxillary lobes of coxae 2 simple, without tubercles (Fig. 81).

Genitalia (Fig. 82). Similar in structure to *heteromorpha.*

Chelicerae. Normal in size, relatively smaller than *heteromorpha.*

Pendipalps (Figs. 83, 84). Trochanter with a pair of small ventral tubercles. Femur with a small mid-dorsal tubercle and a conical tubercle on the proximo-ventral surface; mid-ventral tubercle lacking. Tibia and tarsus with three spinous tubercles on both pro- and retro-ventral surfaces.

Legs. Coxae as shown in Fig. 81. Tubercles on the ventral surface of coxa 1 stronger and on retro-lateral surface of coxa 2 weaker than in *heteromorpha.* Prolateral surface of coxa 4 smooth. Tarsal formula 3, 8–9, 4, 4.

Measurements

Scute Length 3.74 Width 2.86

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.88	0.44	1.41	0.53	0.92	1.01	0.79	5.98
Leg 2 ..	1.28	0.48	1.76	0.75	1.32	1.28	1.80	8.67
Leg 3 ..	0.97	0.44	1.36	0.48	0.92	1.14	1.10	6.41
Leg 4 ..	1.23	0.48	1.67	0.88	1.41	1.67	1.23	8.57
Pedipalp ..		0.40	1.32	0.53	1.10		0.84	4.19
Chelicera ..	Basal	1.19	Second	1.54				2.73

Female. General structure similar to male. The spination of the pedipalps (Fig. 85) is similar to that of the female of *heteromorpha.*

Measurements

Scute Length 3.70 Width 2.95

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.57	0.40	1.19	0.57	0.84	0.97	0.84	5.38
Leg 2 ..	1.28	0.41	1.54	0.75	1.28	1.14	1.72	8.12
Leg 3 ..	1.06	0.40	1.14	0.44	0.88	0.97	0.92	5.81
Leg 4 ..	1.32	0.44	1.55	0.84	1.23	1.54	1.14	8.06
Pedipalps ..		0.44	1.10	0.53	0.66		0.66	3.39
Chelicera ..	Basal	0.88	Second	1.36				2.24

Types. Holotype male, Okarito, December 17, 1949, R. R. Forster (C.M.A. 60); Allotype female, same data (C.M.A. 61); Paratypes: 1 ♂, 1 ♀, same data (D.M.2/186).

Remarks. The structure of the eyemound and the lack of a mid-ventral tubercle on the femur of the male pedipalp serves to separate this sub-species from the nominate species.

Nuncia (Nuncia) grandis n.sp.

Figs. 86–90

Male

Colour. Ground colour of body and appendages dark reddish-brown heavily overlaid with black shading.

Body. Scute very finely granulate. Eyemound evenly conical, wider than high in the ratio of 7:5. There is a shallow groove separating the cephalothoracic carapace from the tergal region of the scute. When viewed from the side, the cephalothoracic carapace and the tergal region are slightly rounded (Fig. 86). The free tergites and sternites lack granules. The inner half of the maxillary lobes of coxae 2 (Fig. 87) project forward as a pair of wide plates, the anterior margin sloping back to the median line. There are two small lobes on the outer surface.

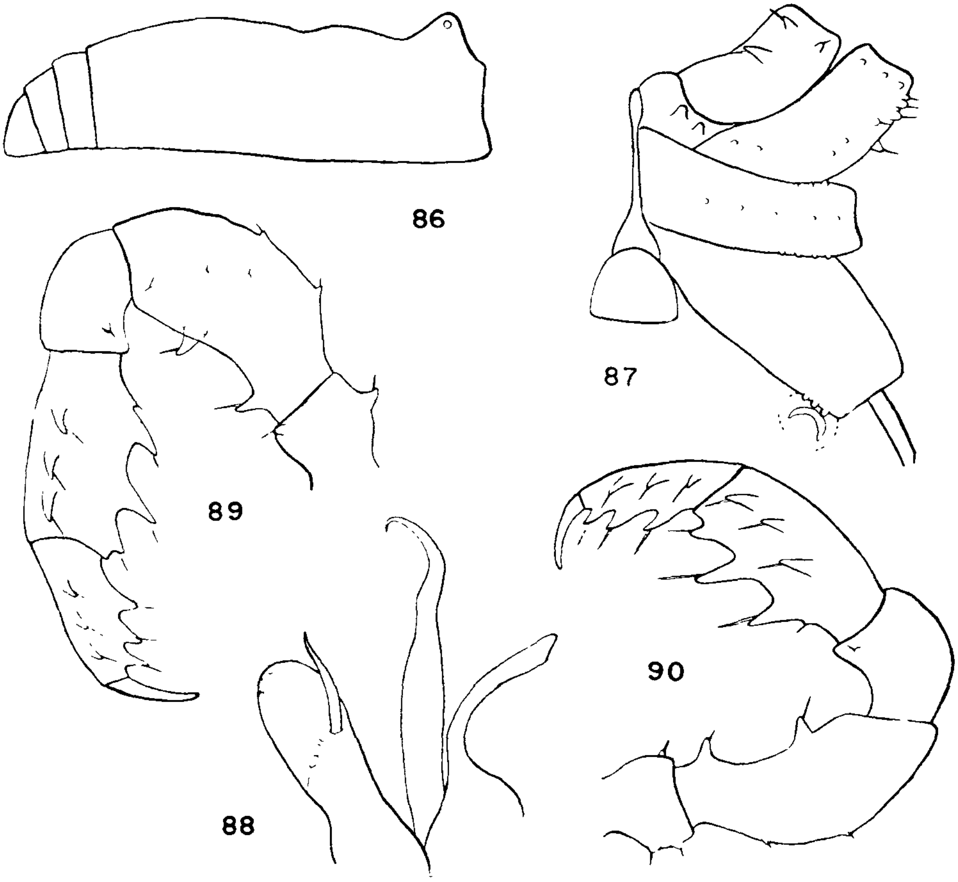
Genitalia (Fig. 88). The aedeagus is slender, narrowing evenly anteriorly where it is terminated sharply, without sheath. There is a single flattened ventral plate provided on each side with a strong superior seta and three similar inferior setae.

Chelicerae. The basal segment is smooth, constricted proximally and distends evenly anteriorly. The second segment is furnished with seven or eight tubercles on the dorsal surface.

Pedipalps (Fig. 89). There is a sharp tubercle on the dorsal surface of the trochanter and a small rounded tubercle on the ventral surface. There are two small tooth-like spines on the dorsal surface of the femur. Ventral surface armed with two strong spines, one near the base and the other slightly beyond the mid-point. The patella is smooth apart from a small tubercle on the prolateral surface. The ventral surfaces of both the tibia and tarsus are flattened. There are three spinous tubercles on the retro-ventral and three on the pro-ventral surfaces of both segments; the third retro-ventral tubercle of the tibia is small.

Legs. The coxae, trochanters and femora are sparsely granulate. Two prominent tubercles are present on the ventral surface of coxa 1, one at two-thirds of the length of the segment from the base and the other distal. There are a few small tubercles on the distal half of the retrolateral snrface of coxa 2, and a row of granules along both the pro-ventral and retro-ventral margins of coxae 3. Coxa 4 is smooth apart from three small uniformly sized tubercles on the retro-margin above the spiracle.

Tarsal segments, 3, 11–16, 4, 4.



FIGS. 86-90 *Nuncia (Nuncia) grandis* n.sp.
Fig. 86 Lateral view of body; Fig. 87 Coxal region of male; Fig. 88 Male genitalia; Fig. 89 Pro-lateral surface male pedipalp; Fig. 90 Pro-lateral surface female pedipalp.

Measurements

Scute Length 5.46 Width 5.68

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.72	0.66	3.08	1.32	2.42	3.30	1.98	14.48
Leg 2 ..	2.60	0.84	4.00	1.54	3.52	4.43	3.87	20.80
Leg 3 ..	2.02	0.88	2.73	1.23	2.25	3.52	2.42	15.05
Leg 4 ..	2.68	1.15	4.00	1.72	3.17	5.24	2.86	20.82
Pedipalp ..		0.70	2.20	1.89	1.36		1.32	7.47
Chelicera ..	Basal	1.76	Second	1.98				3.74

Female. The structure agrees with the male but the femur of the pedipalp is more slender (Fig. 90).

Measurements

Scute Length 5.15 Width 11.2

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.32	0.71	2.77	1.10	2.42	2.90	1.72	12.94
Leg 2 ..	2.29	0.72	4.00	1.54	3.52	4.35	4.17	19.59
Leg 3 ..	1.98	0.75	2.86	0.97	2.24	3.30	2.20	14.30
Leg 4 ..	2.64	0.93	3.92	1.36	3.08	4.87	2.64	19.44
Pedipalp ..		0.62	1.63	0.92	1.36		1.19	5.72
Chelicera ..	Basal	1.67	Second	2.03				3.70

Types. Holotype male, Mount Ngamoka, Waikaremoana, December 14, 1946, R. R. Forster (D.M.2/197); Allotype female, same data (D.M.2/198); Paratypes: same data, 1 ♂, 1 ♀ (C.M.A. 77).

Records

North Island. Kaihinu, Tararua Range, 1,500 feet, June 19, 1948, R. K. Dell, 1 ♂, 1 ♀ (D.M.2/633); Akatarawa, January 1, 1943, R. R. Forster, 1 ♀ (D.M.2/629). *South Island.* Mount Arthur Track, Mount Arthur Tableland, January 22, 1948, R. R. Forster, 1 ♂ (D.M.2/630); Flora Hut, Mount Arthur Tableland, January 28, 1948, R. K. Dell, 3 ♂, 1 ♀ (D.M.2/632); Leslie Valley Track, Mount Arthur Tableland, January 24, 1948, R. R. Forster (D.M.2/631); Canaan Track, Nelson, October 25, 1948, R. A. Cumber, 1 ♀ (C.M.A. 702); Canaan, Nelson, November, 1951, A. C. O'Connor, 3 ♂, 1 ♀ (C.M.A. 617); Kairuru, Nelson, December, 1951, A. C. O'Connor, 1 ♂, 2 ♀(C.M.A. 611); Kairuru, December, 1948, A. C. O'Connor, 7 ♂, 3 ♀, 2 immature (C.M.A. 499); Awarua Bay, Takaka, Nelson, December, 1948, A. C. O'Connor, 1 ♂ (C.M.A. 497); Oparara, Karamea, January 20, 1950, R. R. Forster, 2 ♀ (C.M.A. 495); South Terrace, Karamea, January 20, 1950, R. R. Forster, 4 ♂, 1 ♀ (C.M.A. 500); Seddonville, Westland, February, 1951, A. C. O'Connor, 1 ♂ (C.M.A. 621); Inangahua, Westland, December 12, 1951, W. Clark, 1 ♂ (C.M.A. 618); Woodpecker Bay, Westland, January 22, 1950, R. R. Forster, 1 ♀ (C.M.A. 496); Bullock Creek, Punakaiki, Westland, January 18, 1950, R. R. Forster, 1 ♀ (C.M.A. 501); Mount Davie, near Greymouth, Westland, February 20, 1949, L. P. Hughson, 1 ♀ (C.M.A. 498).

Remarks. The structure of the male genitalia separates this species from all other species of *Nuncia.*

Nuncia (Nuncia) conjuncta n.sp.

(Figs. 91–96)

Male

Colour. Scute orange-brown with black reticulate markings on the anterior surface of the carapace and an irregular black band extending down the lateral margins. The posterior margin of the scute and the free tergites are heavily shaded with black and with a transverse row of orange coloured spots. Dorsal surfaces of chelicerae and pedipalps with black reticulate markings.

Body. Scute closely granulate, slightly coriaceous in parts. The eyemound rises vertically up from the anterior margin of the carapace, but slopes gently down the posterior surface (Fig. 91); as high as it is wide at the base. Scutal groove absent, surface of the carapace behind the eyemound and the tergal region evenly rounded. Maxillary lobes of Coxae 2 with a conical secondary process (Fig. 92).

Genitalia. As shown in Fig. 93. The aedeagus is slender, enclosed in a sheath which extends almost to the apex. Superior seta very long and slender, extending beyond the end of the plate, basal inferior seta short and relatively stout, distal pair slender, two-thirds of the length of the superior.

Chelicerae. Both segments are smooth. Shallow proximo-dorsal furrow present on the proximo-dorsal surface of the basal segment.

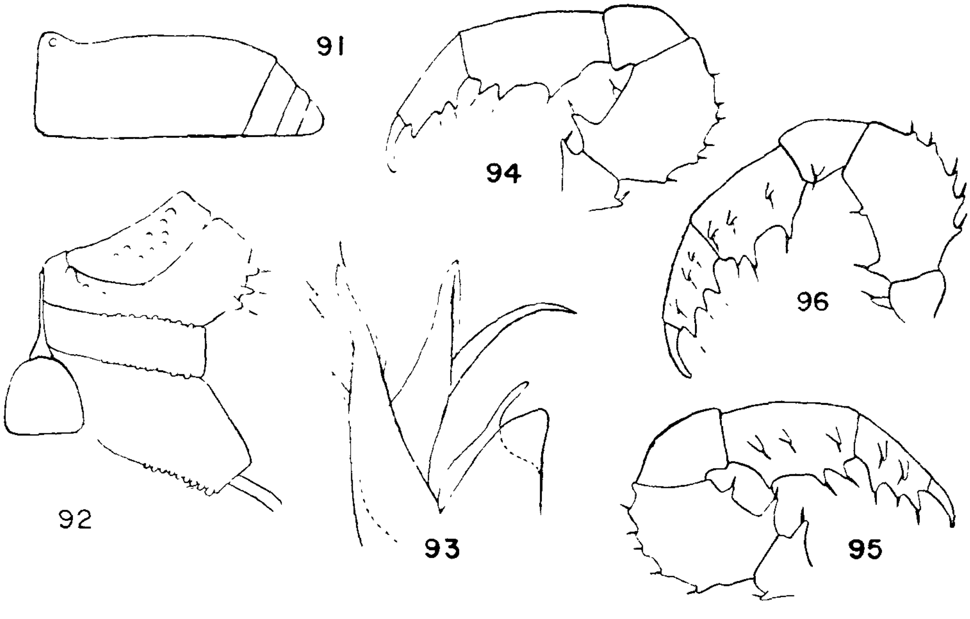
Pedipalps (Figs. 94, 95). Trochanter with a strong ventral spinous tubercle. Femur with small dentiform tubercles along the dorsal surface, strong proximo-ventral spiniform tubercle and a smaller more rounded tubercle on the mid-ventral surface. Tibia with four small tubercles on the retro-ventral surface, arranged in a proximal and a distal pair. Pro-ventral surface of tibia and both pro- and retro-ventral surfaces of tarsus with three small spiniform tubercles.

Legs. Coxae with few tubercles as shown in Fig. 92, pro-lateral surface of coxa 4 smooth. Femora of all legs with a few minute tubercles on the ventral surfaces. Tarsal formula 3.5.4.4.

Measurements

	Scute		Length 1.76		Width 1.45			
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.53	0.22	0.70	0.35	0.53	0.62	0.48	3.43
Leg 2 ..	0.70	0.22	0.88	0.48	0.66	0.75	0.88	4.57
Leg 3 ..	0.66	0.20	0.70	0.36	0.57	0.70	0.62	3.81
Leg 4 ..	0.88	0.32	1.01	0.53	0.92	1.10	0.66	5.42
Pedipalp ..		0.20	0.53	0.26	0.40		0.26	1.65
Chelicera ..	Basal	0.31	Second	0.62				0.93

Female. Larger than male but similar in structure, pedipalp differing slightly, as shown in Fig. 96.



FIGS. 91-96 *Nuncia (Nuncia) conjuncta* n.sp.
Fig. 91 Lateral view of body; Fig. 92 Coxal region of male; Fig. 93 Male genitalia; Fig. 94 Retro-lateral surface male pedipalp; Fig. 95 Pro-lateral surface male pedipalp; Fig. 96 Pro-lateral surface female pedipalp.

Measurements

Scute Length 1.94 Width 1.85

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	0.53	0.22	0.75	0.40	0.48	0.53	0.48	3.39
Leg 2	0.70	0.26	0.97	0.53	0.84	0.97	0.75	5.02
Leg 3	0.70	0.22	0.70	0.35	0.57	0.66	0.57	3.77
Leg 4	0.92	0.31	0.97	0.48	0.92	1.10	0.57	5.27
Pedipalp		0.20	0.53	0.22	0.40		0.26	1.61
Chelicera	Basal	0.26	Second	0.66				0.92

Types. Holotype male, Island in Lake Waikare-iti, Waikaremoana, December 29, 1945, P. N. Wilton (D.M.2/334); Allotype female, same data (D.M.2/335); Paratypes: same data, 1 ♂ (C.M.A. 224); Panikiri Bluff, 3,700 feet, Waikaremoana, December 11, 1946, R. R. Forster, 3 ♂, 1 ♀, 1 immature (C.M.A. 245; D.M.2/337); Waikaremoana, December 22, 1945, P. N. Wilton, 2 ♂ (D.M.2/336); Mount Ngamoko, Waikaremoana, December 13, 1946, R. R. Forster, 1 ♀ (D.M.2/919).

Records. Stephen Island, September 13, 1948, J. T. Salmon, 2 immature (D.M.2/922); Stephen Island, November 6, 1949, W. H. Dawbin, 1 ♀ (C.M.A. 247); Stephen Island, May 19, 1950, R. R. Forster, 2 ♂, 1 ♀ (C.M.A. 246); Inner Chetwode Island, September 12, 1948, J. T. Salmon, 1 ♀ (C.M.A. 921); Maitai Valley, Nelson, October, 1948, A. W. Parrott, 1 ♂, 2 ♀ (C.M.A. 248); Reservoir, Nelson, September, 1948, A. W. Parrott, 1 ♂ (C.M.A. 250); Whangamoa, August 30, 1948, A. C. O'Connor, 1 ♂ (C.M.A. 249); Flora Saddle, 2,300 feet, Mount Arthur District, February 26, 1946, J. T. Salmon, 1 ♂ (D.M. 2/339); Flora Hut, Mount Arthur District, January 22, 1948, R. R. Forster, 1 ♂ (D.M.2/340); Growler, Flora Track, Mount Arthur District, January 27, 1948, R. R. Forster, 1 ♂, 2 ♀ (D.M.2/341).

Nuncia (Nuncia) conjuncta magnopercula n.s.sp.

Figs. 97–101

Male

Colour. General colour of the scute yellow-brown, with indistinct blackish shading on the anterior surface of the carapace and blackish bands down the median surface of the scute from behind the eyemound and with a similar band down each lateral margin. Dorsal surfaces of chelicerae and pedipalps covered with black reticulate markings.

Body. The scute is dull in appearance but not granulate. The eyemound is low, wider than high in the ratio of 7:3, rising sharply up from the anterior margin of the scute in front and from the carapace behind, but gently rounded apically, slightly higher above the eyes. Scute as shown in Fig. 97, scutal groove absent. Maxillary lobes of coxae 2 with a strong secondary process as shown in Fig. 98. The genital operculum is prominent, its width being equal to a quarter of the width of the body in that region.

Genitalia (Fig. 99). The aedeagus is long and curved and enclosed by the sheath. Each ventral plate with one superior, three inferior setae; setae long and slender.

Chelicerae. Both segments smooth; basal segment with a shallow proximo-dorsal furrow.

Pedipalps (Fig. 100). There is a strong conical tubercle on the ventral surface of the trochanter, followed by two similar tubercles on the ventral surface of the femur, one proximal, second median. Numerous small dentiform tubercles are present on the dorsal surface of the femur and a small conical tubercle on the distal prolateral surface. Tibia and tarsus with three spiniform tubercles on both pro- and retro-ventral margins, two further small tubercles present on the retro-ventral surface of tibia, one on each side of the first main tubercle.

Legs. Coxae 1, 2 and 4 armed with small tubercles as shown in Fig. 98. Tarsal formula 3.6.4.4.

Measurements

Scute Length 2.29 Width 1.98

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	0.57	0.26	0.84	0.48	0.57	0.70	0.48	3.90
Leg 2	0.88	0.26	1.01	0.48	0.97	1.10	1.06	5.76
Leg 3	0.79	0.26	0.70	0.26	0.53	0.75	0.57	3.86
Leg 4	0.92	0.31	1.10	0.57	0.92	1.32	0.70	5.54
Pedipalp		0.20	0.88	0.40	0.53		0.40	2.41
Chelicera	Basal	0.57	Second	1.06				1.63

Female. The black markings on the scute are more pronounced than in male. There are no secondary processes on the maxillary lobes. Pedipalps as shown in Fig. 101.

Measurements

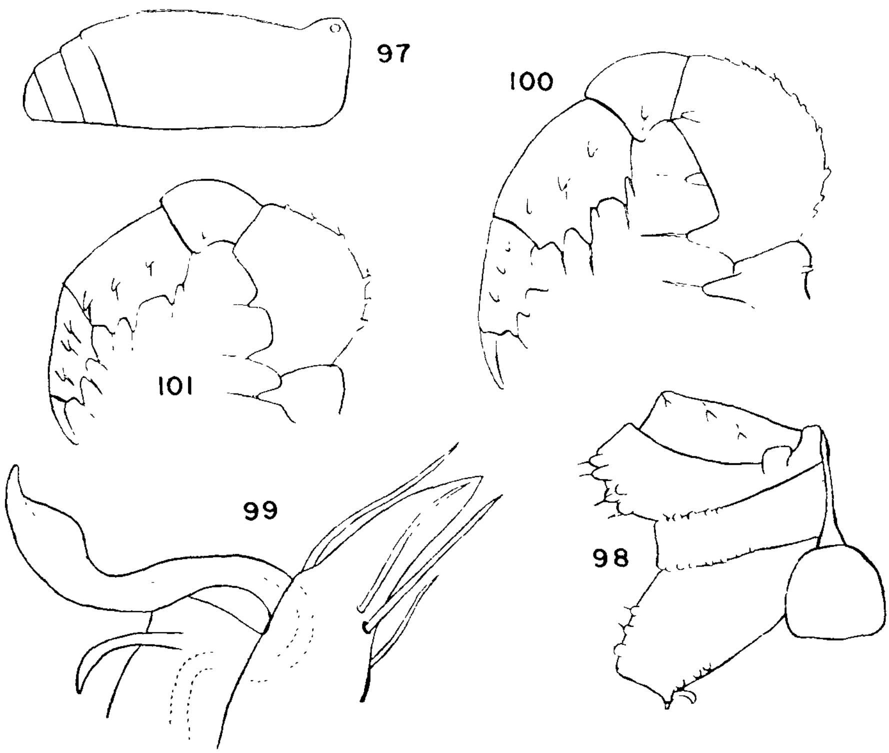
Scute Length 2.20 Width 1.85

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	0.53	0.22	0.75	0.40	0.57	0.62	0.35	3.44
Leg 2	0.88	0.26	0.92	0.53	0.88	0.97	0.79	5.23
Leg 3	0.70	0.22	0.66	0.40	0.62	0.66	0.62	3.88
Leg 4	0.84	0.26	0.92	0.53	0.92	1.10	0.75	5.32
Pedipalp		0.20	0.66	0.35	0.57		0.40	2.18
Chelicera	Basal	0.48	Second	0.75				1.23

Types. Holotype male, Karori Hills, July 6, 1946, R. R. Forster (D.M.2/315); Allotype female, same data (D.M.2/316); Paratypes: same data, 3 ♂, 2 ♀ (C.M.A. 236); Karori Hills, April 26, 1949, R. R. Forster, 5 ♂, 4 ♀ (C.M.A. 238); same locality, April 20, 1946, R. R. Forster, 1 ♀ (D.M.2/319); Karori, June 16, 1942, R. R. Forster, 1 ♂, 3 ♀ (D.M.2/324); Karori Hills, July 12, 1947, R. R. Forster, 2 ♂, 1 ♀ (D.M.2/326).

Records. Wiltons Bush, Wellington, November 6, 1920, R. E. R. Grimmett, 1 ♂, (D.M.2/320); Khandallah Reserve, Wellington, May 20, 1946, G. Ramsay, 1 ♀ (D.M.2/327); Stokes Valley, Wellington, January 10, 1947, R. K. Dell, 1 ♂, 2 ♀ 2 ♀ (D.M.2/329); Days Bay, Wellington, July 19, 1942, R. R. Forster, 1 ♂, 1 ♀ (D.M.2/325); Wainui-o-mata, Wellington, April 16, 1948, R. K. Dell, 1 ♀ (D.M.2/321); Orongorongo, December 6, 1920, R. E. R. Grimmett, 1 ♂, 1 ♀ (D.M.2/318); Mount Ross, South Wairarapa, April 5, 1947, R. R. Forster, 1 ♂, 7 ♀, 5 immature (D.M.2/323; C.M.A. 239); Turanganui River, Wairarapa, October, 1948, A. C. O'Connor, 1 ♀ (C.M.A. 240); Rimutuka District, August 10, 1942, R. R. Forster, 2 ♂ (D.M.2/331); Akatarawa, January 1, 1943, R. R. Forster, 1 ♂ (D.M.2/332); Pahiatua Track, 1,100 feet, March 28, 1951, A. C. O'Connor, 1 ♂, 2 immature (C.M.A. 910); Feilding, December 26, 1948, R. R. Forster, 4 ♂, 1 ♀, 1 immature (C.M.A. 237); Mangahea, Manawatu, January 29, 1951, T. E. Woodward, 3 ♀ (C.M.A. 909); Onepuhi, Manawatu, November 20, 1947, R. R. Forster, 1 ♀, 1 immature (C.M.A. 322).

Remarks. Separated from *conjuncta* by the larger genital operculum and more prominent process on the maxillary lobes of coxa 2.



FIGS. 97-101 *Nuncia (Nuncia) conjuncta magnopercula*
Fig. 97 Lateral view of body; Fig. 98 Coxal region of male; Fig. 99 Male genitalia; Fig. 100 Pro-lateral surface of male pedipalp; Fig. 101 Pro-ventral surface of female pedipalp.

Nuncia (Nuncia) conjuncta fiordensis n.s.sp.

Figs. 102-107

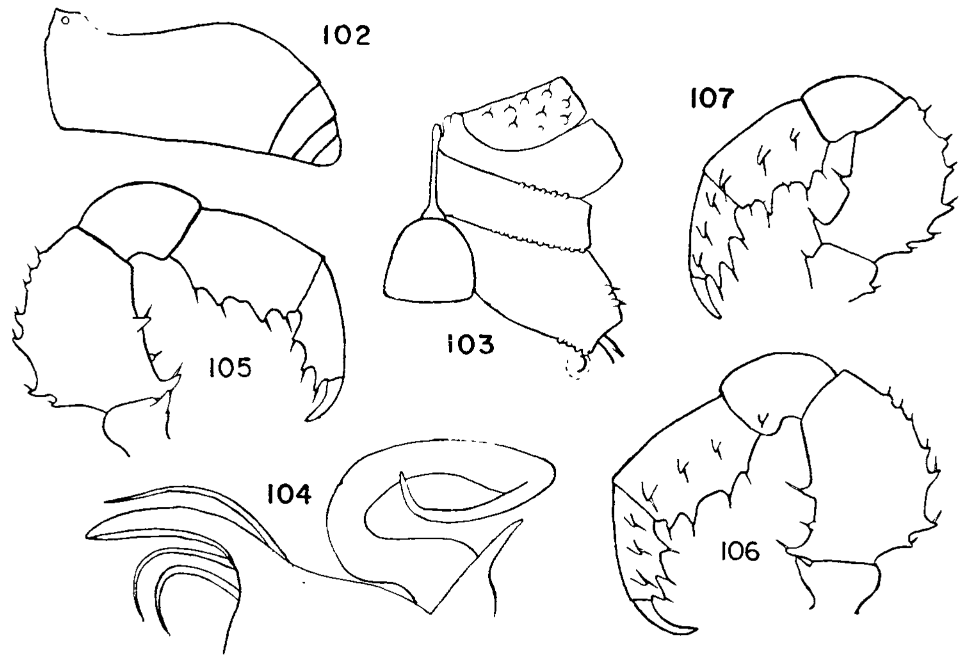
Male

Colour. As in *magnopercula.*

Body. Scute closely granulate, almost coriaceous. Scutal groove not present, tergal region rounded, rising much higher than the level of the carapace (Fig. 102). There are three pairs of small, low tubercles along the median surface of the tergal region and a transverse row of similar tubercles across the posterior margin of the scute and each free tergite. Eyemound as high as it is wide, with a small apical tubercle anterior to the eyes. Maxillary lobes of coxae 2 without secondary processes (Fig. 103). The genital operculum is relatively larger than in *magnopercula*, being equal to one third of the width of the body in that region.

Genitalia. As shown in Fig. 104, differing from *magnopercula* mainly in possessing a more slender aedeagus, with a slender, curved apical portion bent back along the sub-apical portion.

Chelicerae. Basal segment with a broad and shallow, proximo-dorsal groove and a sharp dentiform tubercle on the disto-dorsal surface. Two small tubercles on dorsal surface of second segment.



FIGS. 102-107 *Nuncia (Nuncia) conjuncta fiiorensis* n.s.sp.
Fig. 102 Lateral view of body; Fig. 103 Coxal region of male; Fig. 104 Male genitalia; Fig. 105 Retro-lateral surface male pedipalp; Fig. 106 Pro-lateral surface of male pedipalp; Fig. 107 Pro-lateral surface of female pedipalp.

Pedipalps (Figs. 105, 106). Similar in structure to *magnopercula*, but tubercles relatively smaller.

Legs. Coxae as in Fig. 103, retro-lateral surface of coxa 2 smooth. Tarsal formula 3.6.4.4.

Measurements

Scute Length 2.07 Width 1.67

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.48	0.20	0.84	0.35	0.53	0.70	0.53	3.63
Leg 2 ..	0.79	0.26	0.92	0.53	0.83	1.06	0.92	5.31
Leg 3 ..	0.66	0.26	0.70	0.35	0.57	0.66	0.70	3.90
Leg 4 ..	0.84	0.31	1.06	0.53	0.88	1.14	0.79	5.55
Pedipalp ..		0.20	0.70	0.31	0.57		0.44	2.22
Chelicera ..	Basal	0.48	Second	0.79				1.27

Female. Similar in structure to male; pedipalps as shown in Fig. 107.

Measurements

Scute Length 2.02 Width 1.80

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.48	0.22	0.70	0.31	0.57	0.62	0.53	3.43
Leg 2 ..	0.84	0.26	1.06	0.48	0.79	0.84	0.92	5.19
Leg 3 ..	0.66	0.22	0.53	0.40	0.57	0.62	0.53	3.53
Leg 4 ..	0.92	0.31	1.06	0.48	0.84	1.10	0.70	5.41
Pedipalp ..		0.18	0.66	0.31	0.44		0.35	1.94
Chelicera ..	Basal	0.40	Second	0.75				1.15

Types. Holotype male, Stillwater Base, Caswell Sound, April 11, 1949, R. R. Forster (C.M.A. 241); Allotype female, same data (C.M.A. 242); Paratypes: same data, 2 ♂ (C.M.A. 243; D. M. 2/333); Upper Stillwater River, Caswell Sound, April 13, 1949, R. R. Forster, 3 ♂, 1 ♀ (C.M.A. 315).

Records. Raroa Reserve, Stewart Island, October 30, 1948, R. K. Dell, 1 ♀ (D.M.2/417); Thule, Patterson Inlet, Stewart Island, October 31, 1948, R. K. Dell, 1 ♀ (D.M.2/420); Halfmoon Bay, Stewart Island, November 22, 1946, R. R. Forster, 1 ♀ (D.M.2/421).

Remarks. The absence of a secondary process on the maxillary lobes of coxa 2 and the small tubercle on the eyemound immediately distinguishes this sub-species from both *conjuncta* and *magnopercula.*

Nuncia (Nuncia) vidua n.sp.

Figs. 108–112

Male

Colour. Scute pale-yellow, with brown reticulate markings on the anterior portion of the carapace and with a dark-brown band extending down the median surface of the scute to merge posteriorly with similar lateral bands. Dorsal surfaces of chelicerae and pedipalps with brown reticulate markings.

Body. Scute finely granulate. Eyemound rising sharply on anterior and posterior surfaces but somewhat flattened apically, with a small tubercle on the antero-apical surface (Fig. 108). There is no scutal groove, the scute is profile as shown in Fig. 108. There is a broad secondary process present on the maxillary lobes of coxae 2 (Fig. 109).

Genitalia (Fig. 110). Aedeagus slender, sheath not extending to the apex. Disto-ventral surface of the ventral plates produced into a short spinous process; two short and inconspicuous setae present on the ventral surface, superior seta absent.

Chelicerae. Basal segment with a shallow proximo-dorsal furrow and a small dentiform tubercle on the disto-dorsal surface. Second segment with a few small, dorsally situated, tubercles.

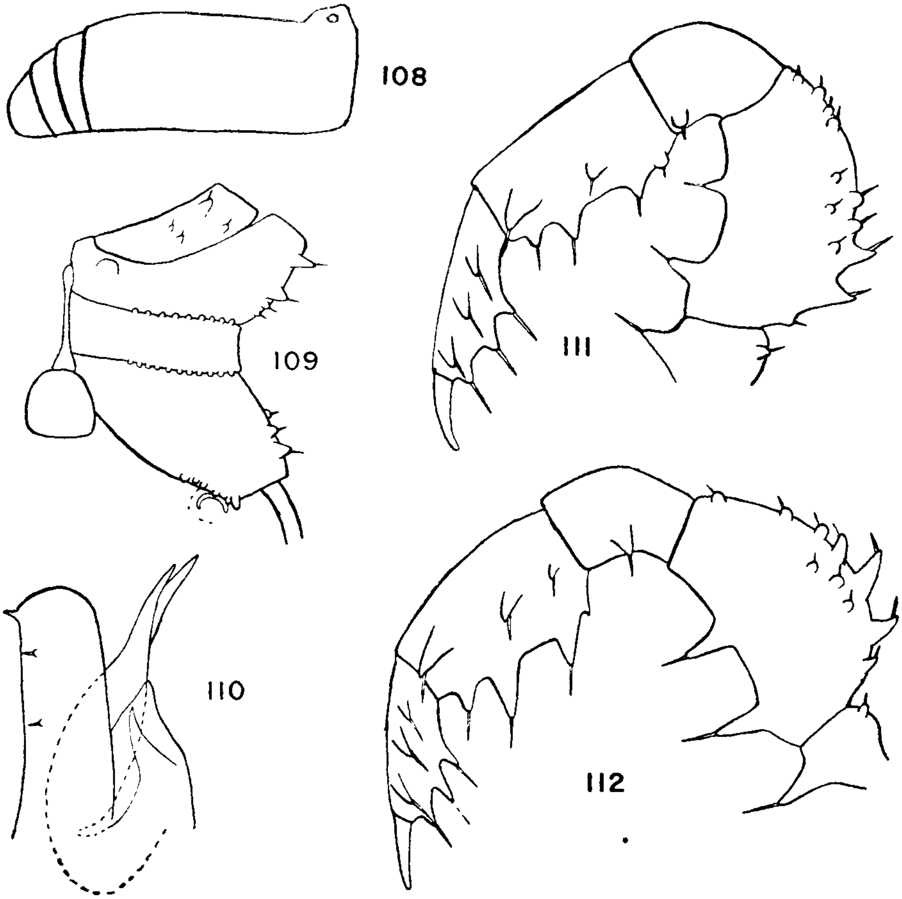
Pedipalps (Fig. 111). Trochanter with a strong conical tubercle on the ventral surface. Ventral surface of femur with two similar tubercles, one proximal, one median, in position. Four spiniform tubercles present on the proximal half of the dorsal surface, of which the median pair are strong, and with a few smaller, rounded tubercles on the distal half of the dorsal surface and the mid pro-dorsal surface. There are two tubercles on pro-ventral margin of the tibia, small median and stout distal. Three spiniform tubercles on retro-lateral surface of tibia and both pro- and retro-lateral surfaces of tarsus.

Legs. Coxae as in Fig. 109. Small conical tubercles present on the ventral surface of coxa 1, retro-lateral surface of coxa 2 and the pro-lateral surface of coxa 4. Tarsal formula 3.6.4.4.

Measurements

Scute Length 2.16 Width 1.80

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.57	0.22	0.79	0.35	0.62	0.70	0.62	3.87
Leg 2 ..	0.97	0.31	1.19	0.57	0.97	0.88	1.23	5.12
Leg 3 ..	0.79	0.26	0.70	0.40	0.66	0.70	0.62	4.13
Leg 4 ..	0.92	0.40	1.19	0.96	0.88	1.32	0.84	6.51
Pedipalp ..		0.26	0.84	0.35	0.66		0.53	2.64
Chelicera ..	Basal	0.53	Second	0.88				1.41



Figs. 108-112 *Nuncia* (*Nuncia*) *vidua* n.sp.

Fig. 108 Lateral view of body; Fig. 109 Coxal region of male; Fig. 110 Male genitalia; Fig. 111 Pro-lateral surface male pedipalp; Fig. 112 Pro-lateral surface female pedipalp.

Female. Similar in general structure to male. Pedipalps as shown in Fig. 112, tubercles relatively stronger. Maxillary lobes smooth.

Measurements

Scute Length 2.24 Width 1.94

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.62	0.26	0.84	0.40	0.66	0.66	0.62	4.06
Leg 2 ..	0.92	0.31	1.06	0.53	0.80	0.88	1.19	5.69
Leg 3 ..	0.84	0.26	0.70	0.40	0.62	0.66	0.66	4.14
Leg 4 ..	1.06	0.40	1.06	0.66	0.92	1.14	0.84	6.08
Pedipalp ..		0.26	0.70	0.40	0.57		0.44	2.37
Chelicera ..	Basal	0.53	Second	0.92				1.45

Types. Holotype male, Flora Saddle, 3,200 feet, Mount Arthur District, January 20, 1948, R. R. Forster (D.M.2/311); Allotype female, same data, (D.M.2/312); Paratypes: same data, 2 ♂, 3 immature (C.M.A. 235; D.M.2/313); Balloon Hut, Mount Arthur Tableland, February 20, 1946, J. T. Salmon, 1 ♂, 3 immature

(D.M.2/314); Salisbury Clearing, Mount Arthur Tableland, January 23, 1948, R. K. Dell, 1 ♀ (D.M.2/909).

Nuncia (Nuncia) fatula n.sp.

Figs. 113–118

Male

Colour. As in *vidua.*

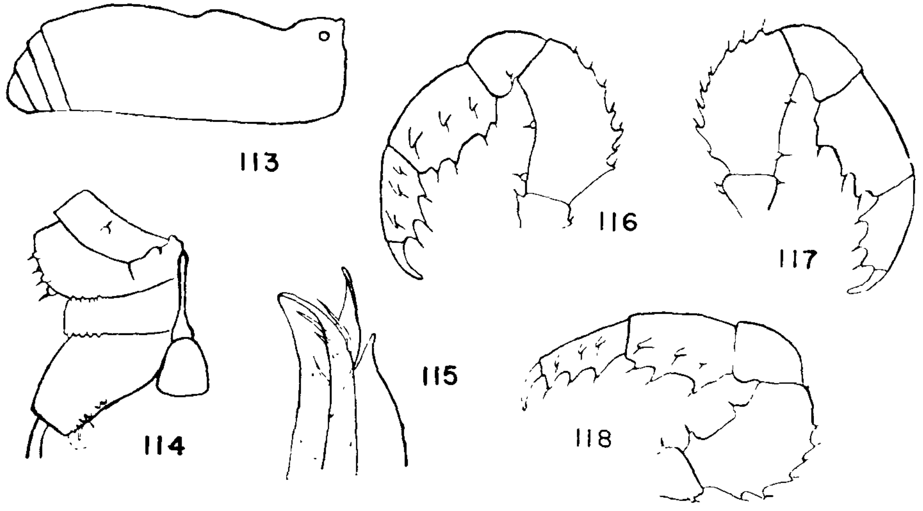
Body. Scute and free tergites finely granulate. The eyemound rises vertically up from the anterior margin of the carapace to a small apical tubercle, somewhat flattened behind the tubercle but sloping steeply down posteriorly (Fig. 113). The scutal groove is shallow, but distinct, the surface of the carapace immediately in front of the groove rises sharply; maxillary lobes of coxae 2 as shown in Fig. 114, with a broad secondary process which extends along two thirds of the anterior surface.

Genitalia (Fig. 115). The aedeagus is slender, and enclosed by a sheath. The superior seta is longer than the three inferior setae but does not extend to the apex of the ventral plate.

Chelicerae. Basal segment with a shallow proximo-dorsal furrow, beyond which the dorsal surface is distended. Second segment with from 2–3 small dorsal tubercles.

Pedipalps (Figs. 116, 117). Trochanter with a small tubercle on both dorsal and ventral surfaces. Femur with a row of small dentiform tubercles extending along the dorsal surface and two small rounded ventral tubercles, one proximal, the other at about two-thirds. Tibia and tarsus with three spiniform tubercles on both pro- and retro-ventral surfaces.

Legs. Coxae as in Fig. 114. There is a single small rounded tubercle on the mid-ventral surface of coxa 1 and a group of four to five similar tubercles on the retro-lateral surface of coxa 2. Tarsal formula 3.6.4.4.



FIGS. 113-118 *Nuncia (Nuncia) fatula* n.sp.
Fig. 113 Lateral view of body; Fig. 114 Coxal region of male; Fig. 115 Male genitalia; Fig. 116 Pro-lateral surface male pediapalp; Fig. 117 Retro-lateral surface male pedipalp; Fig. 118 Pro-lateral surface female pedipalp.

Measurements

Scute Length 1.45 Width 1.10

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	0.40	0.10	0.66	0.26	0.48	0.48	0.57	2.95
Leg 2	0.62	0.22	0.88	0.44	0.70	0.75	0.75	4.36
Leg 3	0.48	0.18	0.48	0.31	0.48	0.49	0.53	2.95
Leg 4	0.66	0.26	0.79	0.44	0.71	0.88	0.58	4.32
Pedipalp		0.10	0.53	0.26	0.46		0.35	1.70
Chelicera	Basal	0.35	Second	0.75				1.10

Female. Similar structure to male. Secondary lobe absent from maxillary lobes. Pedipalps smaller but tubercles relatively larger as shown in Fig. 118.

Measurements

Scute Length 1.63 Width 1.32

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	0.44	0.10	0.57	0.31	0.44	0.57	0.44	2.87
Leg 2	0.66	0.18	0.62	0.40	0.70	0.62	0.84	4.02
Leg 3	0.48	0.10	0.48	0.22	0.53	0.48	0.53	2.82
Leg 4	0.75	0.22	0.84	0.40	0.62	0.92	0.62	4.37
Pedipalp		0.09	0.53	0.26	0.44		0.35	1.67
Chelicera	Basal	0.31	Second	0.70				1.01

Types. Holotype male, South Terrace, Karamea, January 20, 1950, R. R. Forster (C.M.A. 281); Allotype female, same data (C.M.A. 282); Paratype male, same data (C.M.A. 283).

Remarks. This species is close to *vidua* and should perhaps be given only sub-specific rank. It can be separated from *vidua* by the presence of a scutal groove, the much more prominent maxillary process, and the weak tubercles on the trochanter and femur of the pedipalps.

Nuncia (Nuncia) constantia n.sp.

Figs. 119–123

Male

Colour. Scute deep orange-brown, with black reticulate markings on the carapace, a black patch on the lateral margins of the scute and a broken median band which extends from behind the eyemound down to the second free tergite.

Body. The eyemound slopes steeply up from immediately behind the anterior margin of the carapace, evenly rounded above and behind the level of the eyes (Fig. 119), wider than high in the ratio of 5:4. Scute closely granulate; scutal groove absent. The maxillary lobes of coxae 2 with a few small granules (Fig. 120).

Genitalia. As in Fig. 121. The aedeagus is slender and provided with a sheath which extends over the whole length; the sheath is armed with numerous small spicules on the lower ventral surface. Dorsal plates short, spiculate, ventral plates paired, S 1 strong, extending to the distal extremity of the plate, I 1 short, I 2 and I 3 almost as long as S 1.

Chelicerae. Both segments smooth; proximo-dorsal furrow shallow.

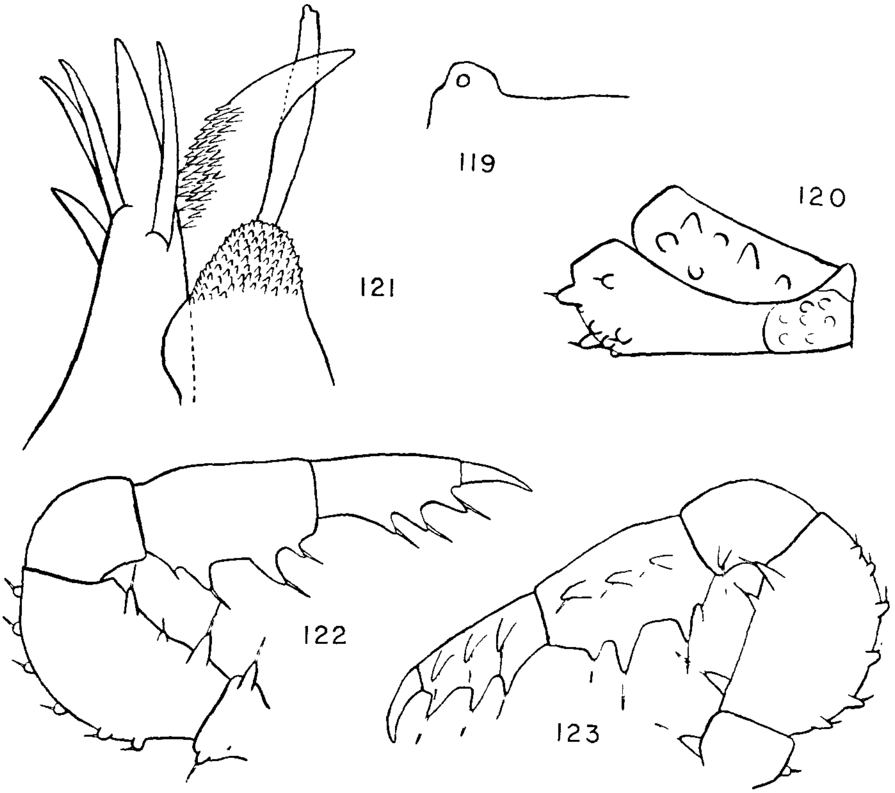
Pedipalps (Figs. 122, 123). Trochanter with a strong conical ventral tubercle, smaller rounded dorsal tubercle. Femur with three conical tubercles on the ventral surface, median small, and with a strong conical tubercle on the distal pro-ventral surface. Tibia and tarsus each with three strong spiniform tubercles on both pro- and retro-ventral surfaces.

Legs. There are small tubercles present on the ventral surface of coxa 1, retro-lateral surface of coxa 2 (Fig. 120), and the pro-lateral surface of coxa 4. Legs with a few granules on the femora, otherwise smooth. Tarsal formula 3.6.4.4.

Measurements

Scute Length 2.24 Width 1.89

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.62	0.18	0.66	0.40	0.53	0.57	0.48	3.44
Leg 2 ..	0.88	0.22	0.97	0.53	0.88	0.92	0.70	5.10
Leg 3 ..	0.66	0.22	0.57	0.40	0.57	0.75	0.62	3.79
Leg 4 ..	0.97	0.31	1.06	0.53	0.92	1.19	0.70	5.68
Pedipalp ..		0.18	0.75	0.31	0.48		0.26	1.98
Chelicera ..	Basal	0.53	Second	0.92				1.45



Figs. 119-123 *Nuncia* (*Nuncia*) *constantia* n.sp.

Fig. 119 Lateral view of carapace and eyemound; Fig. 120 Coxae 1 and 2 of male; Fig. 121 Male genitalia; Fig. 122 Retro-lateral surface of male pedipalp; Fig. 123 Pro-lateral surface of male pedipalp.

Female. Similar in structure to male.

Measurements

Scute Length 2.38 Width 2.07

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.57	0.22	0.66	0.44	0.53	0.57	0.40	3.39
Leg 2 ..	0.92	0.26	0.97	0.53	0.88	0.92	0.88	5.36
Leg 3 ..	0.79	0.22	0.70	0.44	0.62	0.66	0.53	3.96
Leg 4 ..	0.92	0.31	1.06	0.48	0.84	1.10	0.75	5.46
Pedipalp ..		0.18	0.66	0.35	0.48		0.40	2.07
Chelicera ..	Basal	0.44	Second	0.70				1.14

Types. Holotype male, Lake Rubicon, Canterbury, November 14, 1950, R. R. Forster (C.M.A. 272); Allotype female, same data (C.M.A. 273); Paratype female, same data (C.M.A. 274).

Record. Oxford, Canterbury, 1928, A. W. Parrott, 1 ♂ (C.M.A. 459).

Nuncia (Nuncia) inopinata n.sp.

Figs. 124–128

Male

Colour. Ground colour pale yellow, with broken black markings on the scute. Dorsal surfaces of chelicerae and pedipalps with black reticulate matkings.

Body. Scute, free tergites and sternites smooth. Eyemound extremely low and flattened as shown in Fig. 124. The eyes are small, separated from each other by a distance equal to slightly less than that between the eyes and the anterior margin of the carapace. The scutal groove is represented by a shallow depression. Maxillary lobes of coxae 2 with a small secondary process (Fig. 125).

Genitalia. As shown in Fig. 126. The aedeagus is relatively slender and sinuous, sheath absent. Ventral plates, setae stout, sub-equal in length, the three inferior setae grouped below the superior seta.

Chelicerae. Basal segment with a shallow proximo-dorsal groove followed by two small dentiform tubercles and a further single tubercle on the disto-dorsal surface.

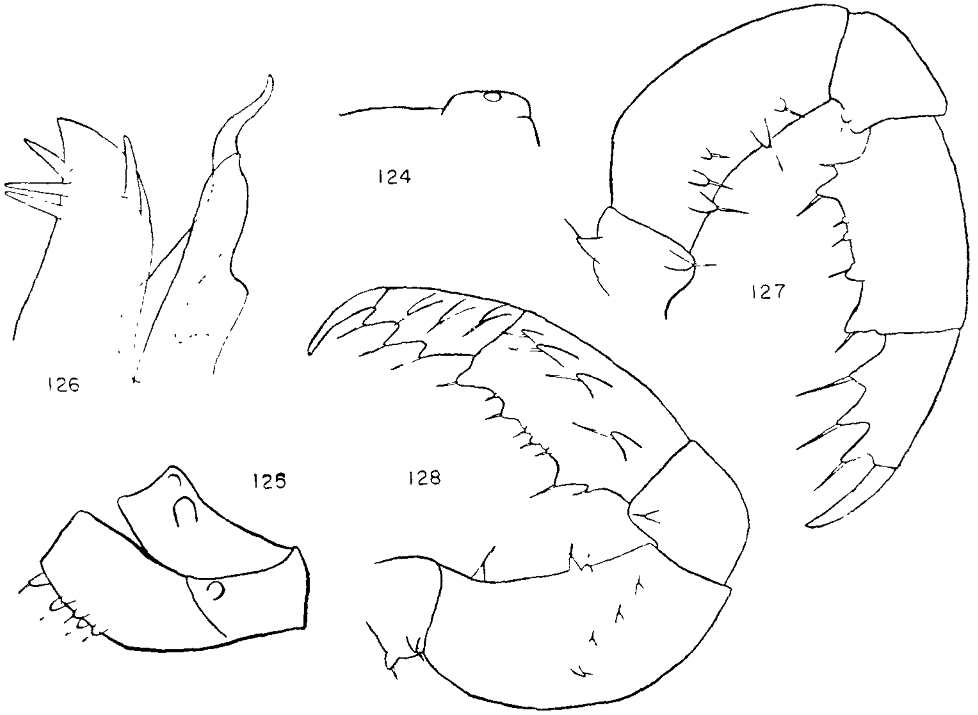
Pedipalps (Figs. 127, 128). Trochanter with two dorsal and one ventral tubercles. Dorsal surface of femur smooth, five conical retro-ventral tubercles, three at about one-third, two at two-thirds of the length of the segment and two further small tubercles on the mid-ventral surface. There are four similar tubercles forming an oblique line down the distal half of the pro-lateral surface. Retro-ventral surface of the tibia with three main tubercles as well as five to six smaller tubercles. There are four tubercles present on the pro-ventral surface. Tarsus with three strong spiniform tubercles on both pro- and retro-ventral surfaces.

Legs. Two blunt tubercles are present on the ventral surface of coxa 1 as shown in Fig. 125. Tarsal formula 3.6.4.4.

Measurements

Scute Length 2.24 Width 1.89

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.53	0.26	0.88	0.40	0.62	0.70	0.66	4.05
Leg 2 ..	0.88	0.31	1.28	0.53	1.06	0.97	0.88	5.91
Leg 3 ..	0.66	0.26	0.88	0.31	0.62	0.79	0.75	4.27
Leg 4 ..	0.92	0.31	1.19	0.48	0.88	1.01	0.75	5.54
Pedipalp ..		0.26	1.10	0.40	0.88		0.04	3.04
Chelicera ..	Basal	1.06	Second	0.92				1.98



FIGS. 124-128 *Nuncia (Nuncia) inopinata* n.sp.
Fig. 124 Lateral view of carapace and eyemound; Fig. 125 Coxae 1 and 2 of male; Fig. 126 Male genitalia; Fig. 127 Retro-lateral surface of male pedipalp; Fig. 128 Pro-lateral surface of male pediaplp.

Types. Holotype male, Chalk Hill, near Oxford, Canterbury, November 4, 1951, R. R. Forster (C.M.A. 287).

Remarks. Unfortunately only a single specimen of this species has been found, but it is so distinctive that I have no hesitation in establishing it as a new species.

Nuncia (Nuncia) tumula n.sp.

Figs. 129–134

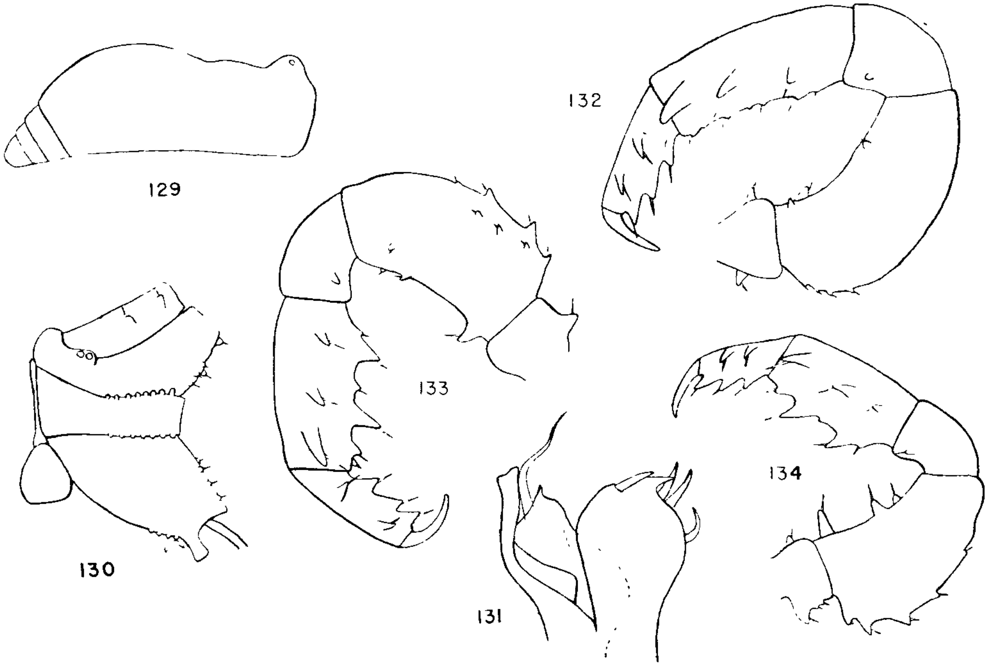
Male

Colour. Scute and free tergites pale yellowish brown, with faint reticulate markings on the anterior surface of the carapace and a broken median band which extends back to the free tergites. Sternites pale orange-brown with a median black band. Dorsal surfaces of pedipalps and chelicerae with faint reticulate markings.

Body. The scute is finely granulate, with a shallow scutal groove. Eyemound evenly rounded, wider than high in the ratio of 9:5 (Fig. 129). The maxillary lobes of coxae 2 are as in Fig. 130, the anterior margin raised and provided with two small bead-like pustules.

Genitalia. As shown in Fig. 131, similar in general form with *levis*, but aedeagus without the lateral process and with a long, slender apical portion which is sinuous distally. Setae relatively stronger.

Chelicerae. Basal segment with a deep proximo-dorsal furrow and two small denti-



FIGS. 129-134 *Nuncia* (*Nuncia*) *tumula* n.sp.
Fig. 129 Lateral view of body; Fig. 130 Coxal region of male; Fig. 131 Male genitalia; Fig. 132 Pro-lateral surface of "Form A" male pedipalp; Fig. 133 Pro-lateral surface of "Form B" male pedipalp; Fig. 134 Pro-lateral surface of female pedipalp.

form tubercles on the disto-dorsal surface. Second segment with 3-4 small tubercles on the dorsal surface.

Pedipalps. As shown in Figs. 132, 133. Similar to *levis*, differing mainly on the retro-ventral surface of the tibia where there are seven small uniformly sized tubercles, and in possessing only two spinous tubercles on the pro-ventral margin of the tarsus.

Legs. Coxae as shown in Fig. 130. Tubercles distributed as in *levis*, but generally smaller, elongate tubercle present on the distal retro-lateral margin of coxa 4. Tarsal formula 3.7.4.4.

Measurements

Scute Length 2.68 Width 2.20

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.66	0.22	1.19	0.48	0.70	0.88	0.75	4.88
Leg 2 ..	1.14	0.31	1.58	0.57	1.19	1.41	1.32	7.52
Leg 3 ..	0.88	0.30	0.97	0.48	0.84	0.92	1.23	5.62
Leg 4 ..	1.19	0.35	1.32	0.53	1.23	1.63	1.10	7.35
Pedipalp ..		0.26	1.32	0.52	1.06		0.62	3.78
Chelicera ..	Basal	0.97	Second	1.36				2.33

Female. Scute and free tergites heavily shaded with blackish-brown and with three crescent-shaped orange patches on the tergal region. The femur of the pedipalp relatively shorter than the male and armed on the ventral surface with a strong proximo-ventral conical tubercle and two similar but smaller tubercles at about two-thirds. Retro-ventral margin of the tibia with two strong spiniform tubercles in addition to a few small rounded tubercles (Fig. 134). Structure otherwise as in male.

Measurements

Scute Length 2.42 Width 1.98

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.62	0.20	0.79	0.48	0.70	0.70	0.69	4.18
Leg 2 ..	1.01	0.31	1.23	0.57	0.97	1.06	1.10	6.25
Leg 3 ..	0.75	0.26	0.75	0.44	0.75	0.70	0.70	4.35
Leg 4 ..	1.14	0.35	1.23	0.53	0.97	1.28	0.84	6.34
Pedipalp ..		0.24	0.88	0.44	0.88		0.44	2.88
Chelicera ..	Basal	0.57	Second	1.14				1.71

Types. Holotype male, South Terrace, Karamea, January 20, 1950, R. R. Forster (C.M.A. 367); Allotype female, same data (C.M.A. 368).

Records. Takaka Hill, September 28, 1948, R. A. Cumber, 2 ♂ (C.M.A. 914); Mount Balloon, 4,100 feet, Mount Arthur Tableland, January 26, 1948, R. R. Forster, 1 ♀ (D.M.2/358); Pelorus Bridge, December 20, 1951, R. Pilgrim, 1 ♀, 1 ♂ (C.M.A. 335).

Nuncia (Nuncia) tapanuiensis n.sp.

Figs. 135–140

Male

Colour. Dark brown, with indistinct black markings on the scute and free tergites. Dorsal surfaces of chelicerae and pedipalps with black reticulate markings.

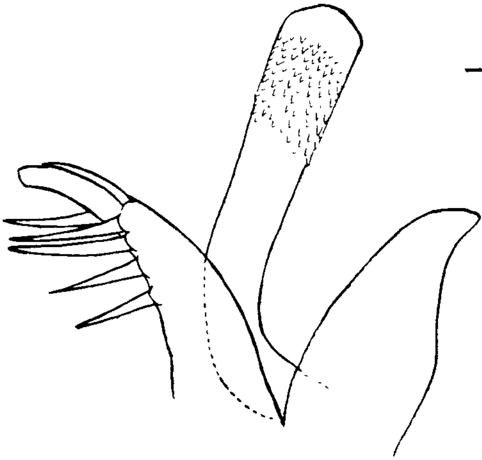
Body. The scute is coriaceous. The eyemound is twice as wide as it is high and is produced up in front of the eyes into a short but broad prominence as shown in Fig. 135. The scutal groove is shallow on the median surface, but deeper near the lateral margins of the scute. Free tergites with low tubercles. Maxillary lobes of coxa 2 with strong secondary process (Fig. 136).

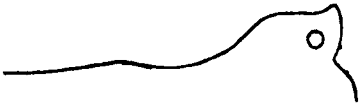
Genitalia. As in Fig. 137. The aedeagus is tube-like and provided with numerous small denticles on the sub-distal surface. The setae are strong and of equal length. There is a single superior and five inferior setae.

Chelicerae. Basal segment with a shallow proximo-dorsal groove and a small disto-dorsal tubercle. Second segment with low tubercles on the dorsal surface.

Pedipalps (Figs. 138, 139). Trochanter with two small rounded tubercles on both dorsal and ventral surfaces. Femur with numerous tubercles on the dorsal surface, conical proximally but more rounded distally, strong conical proximo-ventral tubercle and smaller, rounded tubercles on proximal and mid-ventral surface. Two spinous tubercles on both pro- and retro-ventral surfaces of tibia as well as a few smaller tubercles. Tarsus with three spinous tubercles on both pro- and retro-ventral surfaces.

Legs. Small tubercles situated on the ventral surface of coxa 1 as shown in Fig. 136. There are also small tubercles on the retro-lateral surface of coxa 2 and the pro-lateral surface of coxa 4. Femora of all legs with small tubercle on the ventral surface. Tarsal formula 3.6.4.4.





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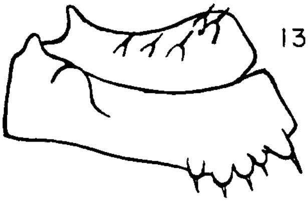

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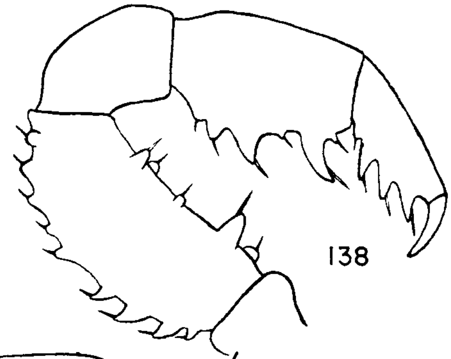

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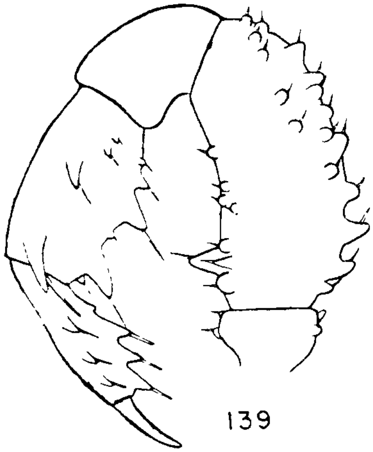

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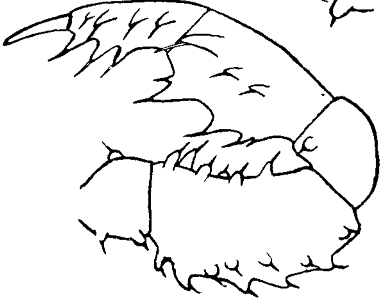


140

FIGS. 135-140 *Nuncia* (*Nuncia*) *tapanuiensis* n.sp.
Fig. 135 Lateral view of carapace and eyemound; Fig. 136 Coxae 1 and 2 of male; Fig. 137 Male genitalia; Fig. 138 Retro-lateral surface male pedipalp; Fig. 139 Pro-lateral surface male pedipalp; Fig. 140 Pro-lateral surface female pedipalp.

Measurements

	Scute	Length 1.76		Width 1.76				
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.48	0.22	0.84	0.40	0.48	0.62	0.53	3.57
Leg 2 ..	0.79	0.26	0.97	0.44	0.79	0.92	0.97	5.14
Leg 3 ..	0.57	0.22	0.53	0.35	0.57	0.62	0.66	3.52
Leg 4 ..	0.79	0.26	0.97	0.48	0.79	0.88	0.75	4.92
Pedipalp ..		0.22	0.88	0.40	0.53		0.40	2.43
Chelicera ..	Basal	0.48	Second	0.75				1.23

Female. Similar structure to male. Maxillary lobe smooth. Pedipalps differing from male as shown in Fig. 140.

Measurements

	Scute	Length 1.72		Width 1.76				
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.31	0.22	0.57	0.26	0.48	0.53	0.44	2.81
Leg 2 ..	0.70	0.26	0.97	0.44	0.66	0.88	0.88	4.79
Leg 3 ..	0.53	0.22	0.57	0.22	0.48	0.57	0.53	3.12
Leg 4 ..	0.70	0.31	0.88	0.44	0.88	0.97	0.62	4.80
Pedipalp ..		0.20	0.62	0.26	0.53	0.79	0.35	2.75
Chelicera ..	Basal	0.44	Second	0.57				1.01

Types. Holotype male, Tapanui, Otago, January 24, 1951, R. R. Forster (C.M.A. 288); Allotype female, same data (C.M.A. 289); Paratypes 1 ♂, 2 ♀, same data (C.M.A. 290).

Remarks. This distinctive species has been found at only one locality and appears to have a very restricted distribution. The structure of the aedagus of this and the following species raises some doubts as to the correct assignation of these species, but I have placed them in *Nuncia* until such time as they may be found to be better situated elsewhere.

Nuncia (Nuncia) dentifera n.sp.

Figs. 141–145

Male

Colour. General colour reddish-brown, but with black reticulate markings on the carapace and black patches on the mid-lateral and median surfaces of the scute. Free tergites and sternites shaded with black. Dorsal surfaces of chelicerae and pedipalps with dark reticulate markings.

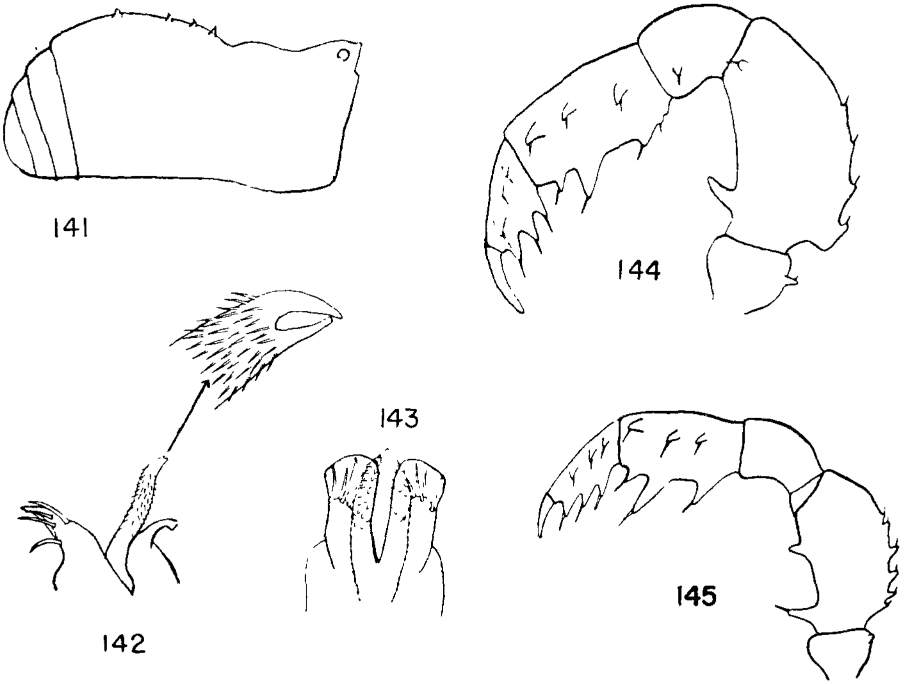
Body. The eyemound rises directly up from the anterior margin of the carapace, with a small apical tubercle as shown in Fig. 141. Scute coriaceous. Scutal groove distinct. Tergal areas not defined by transverse grooves, rounded, higher than carapace, with four median pairs of small spinous tubercles. Maxillary lobes of coxae 2 with prominent secondary process.

Genitalia (Figs. 142, 143). The aedeagus is simple, tubular, when extended, armed with numerous small spines. Ventral plates with one superior and three inferior setae, superior seta longer than inferior.

Chelicerae. Stout. Basal segment with a small disto-dorsal tubercle. Second segment with 3 or 4 larger tubercles on the dorsal surface.

Pedipalps (Fig. 144). Trochanter with a small dorsal tubercle. The femur is provided with a strong sub-rectangular tubercle on the proximo-dorsal surface followed by three small simple tubercles, strong spinous tubercle on proximo-ventral surface and a small rounded tubercle on the distal pro-lateral surface. Tibia and tarsus with three spinous tubercles on both pro- and retro-ventral margins, second retro-ventral tubercle of tibia strong.

Legs. The legs are sparsely granulate. Tarsal formula 3.12–13.4.4.



FIGS. 141-145 *Nuncia* (*Nuncia*) *dentifera* n.sp.

Fig. 141 Lateral view of body; Fig. 142 Lateral view of male genitalia; Fig. 143 Ventral view of male genitalia; Fig. 144 Pro-lateral surface male pedipalp; Fig. 145 Pro-lateral surface female pedipalp.

Measurements

Scute Length 4.27 Width 3.30

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	0.88	0.48	1.98	0.88	1.45	1.89	1.54	9.10
Leg 2	1.72	0.53	2.51	0.89	2.42	2.68	2.64	13.39
Leg 3	1.41	0.57	1.80	0.70	1.41	1.56	1.63	9.08
Leg 4	1.85	0.66	2.42	1.14	2.20	2.86	1.67	12.80
Pedipalp		0.52	1.76	0.71	1.19		0.88	5.06
Chelicera	Basal	1.14	Second	1.72				2.86

Female. Similar to male in general structure. The maxillary lobes are smooth. The pedipalps are as shown in Fig. 145; there are from five to six small uniform tubercles on the dorsal surface of the femur and a small spinous tubercle on the ventral surface at about two-thirds of its length. Tarsal formula 3.11–13.4.4.

Measurements

Scute Length 3.74 Width 2.99

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	0.88	0.40	1.41	0.70	1.23	1.23	0.75	6.60
Leg 2	1.32	0.44	2.20	0.88	1.89	2.20	2.29	11.22
Leg 3	1.10	0.48	1.41	0.70	1.19	1.54	0.97	7.39
Leg 4	1.54	0.53	1.98	0.97	1.94	2.22	1.32	10.50
Pedipalp		0.44	1.32	0.57	0.92		0.75	4.00
Chelicerae	Basal	0.97	Second	1.45				2.42

Types. Holotype male, Bainham, Nelson, February, 1949, A. C. O'Connor (C.M.A. 417); Allotype female, same data (C.M.A. 418); Paratypes: same data, 1 ♂, 1 ♀, 1 immature (C.M.A. 419); Canaan, Nelson, 1951, A. C. O'Connor, 4 ♂ (C.M.A. 689); Growler, Flora Track, Mount Arthur District, January 27, 1948, R. K. Dell, 1 ♀ (D.M.2/518); same locality, April 5, 1948, R. R. Forster, 1 ♂ (D.M.2/519).

Records. 12-mile, Greymouth, April 6, 1950, L. P. Hughson, 1 ♂, 2 immature (C.M.A. 595).

Nuncia (Nuncia) arcuata n.sp.

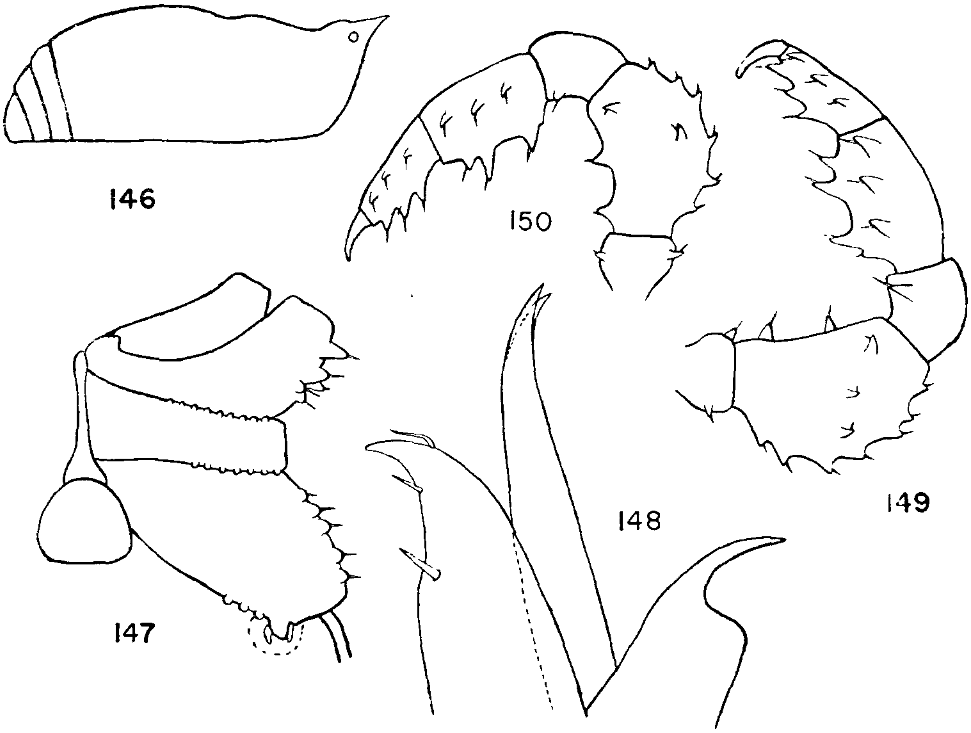
Figs. 146–150

Male

Colour. Scute reddish-brown with an irregular black patch at each side; sternites reddish-brown with a median black band. Black reticulate markings on the dorsal surfaces of chelicerae and pedipalps. Legs pale-brown, heavily shaded with black.

Body. Scute coarsely granulate. The eyemound is as shown in Fig. 146; it is produced apically into a stout spinous process which projects forward beyond the anterior margin of the carapace. The scutal groove is shallow, tergal region evenly rounded and rising above the level of the carapace (Fig. 146). Maxillary lobes without secondary processes (Fig. 147).

Genitalia. As shown in Fig. 148. The aedeagus is slender and enclosed in sheath which extends to its apex. Setae relatively short, two inferior setae, of which the



FIGS. 146-150 *Nuncia* (*Nuncia*) *arcuata* n.sp.

Fig. 146 Lateral view of body; Fig. 147 Coxal region of male; Fig. 148 Male genitalia; Fig. 149 Pro-lateral surface of male pedipalp; Fig. 150 Pro-lateral surface of female pedipalp.

proximal is the stouter. Superior seta bent near the base to follow the surface of the plate.

Chelicerae. The basal segment is constricted proximally, but somehwat distended beyond the proximo-dorsal furrow. Both segments are smooth.

Pedipalps. As shown in Fig. 144. Trochanter with a tubercle on both dorsal and ventral surfaces. Femur with 7–8 dentiform tubercles on dorsal surface and two strong conical tubercles on ventral surface. Tibia and tarsus each with three spinous tubercles on both pro- and retro-ventral surfaces.

Legs. Coxae as shown in Fig. 147. There are strong conical tubercles on the retro-lateral surface of coxa 2, but smaller, more rounded tubercles on the pro-lateral surface of coxa 4. Tarsal formula 3.5.4.4.

Measurements

Scute Length 2.16 Width 2.02

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.66	0.22	0.66	0.44	0.62	0.75	0.48	3.83
Leg 2 ..	0.97	0.26	1.10	0.57	1.06	1.14	0.92	6.02
Leg 3 ..	0.70	0.22	0.70	0.48	0.66	0.84	0.57	4.17
Leg 4 ..	1.06	0.31	1.10	0.66	0.97	1.32	0.79	6.21
Pedipalp ..		0.26	0.75	0.40	0.53		0.40	2.34
Chelicera ..	Basal	0.48	Second	0.88				1.36

Female. Similar in structure to the male. Pedipalp as in Fig. 150.

Measurements

Scute Length 2.11 Width 1.94

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.53	0.18	0.66	0.40	0.62	0.66	0.48	3.53
Leg 2 ..	0.88	0.22	1.14	0.62	0.88	0.97	0.79	5.50
Leg 3 ..	0.75	0.22	0.70	0.31	0.62	0.66	0.57	3.83
Leg 4 ..	0.97	0.31	0.88	0.62	0.97	1.28	0.70	5.73
Pedipalp ..		0.22	0.66	0.26	0.44		0.35	1.93
Chelicera ..	Basal	0.48	Second	0.79				1.27

Types. Holotype male, Fort Hill Bush, Karori, January 22, 1947, R. R. Forster (D.M.2/375); Allotype female, same locality, February 1, 1942, R. R. Forster (D.M.2/376); Paratypes: Karori, November 23, 1949, R. R. Forster, 1 ♀ (C.M.A. 276); Kapiti Island, May, 1947, R. R. Forster, 1 ♂ (C.M.A. 275).

Records. Little Akatarawa, March 2, 1947, R. R. Forster, 1 ♀ (D.M.2/378); Akatarawa, January 1, 1943, R. R. Forster, 1 ♂ (D.M.2/377); Orongorongo, December 6, 1920, R. E. R. Grimmett, 1 ♀ (D.M.2/915).

Remarks. The shape of the eyemound is sufficient to separate this species from all other species of this genus.

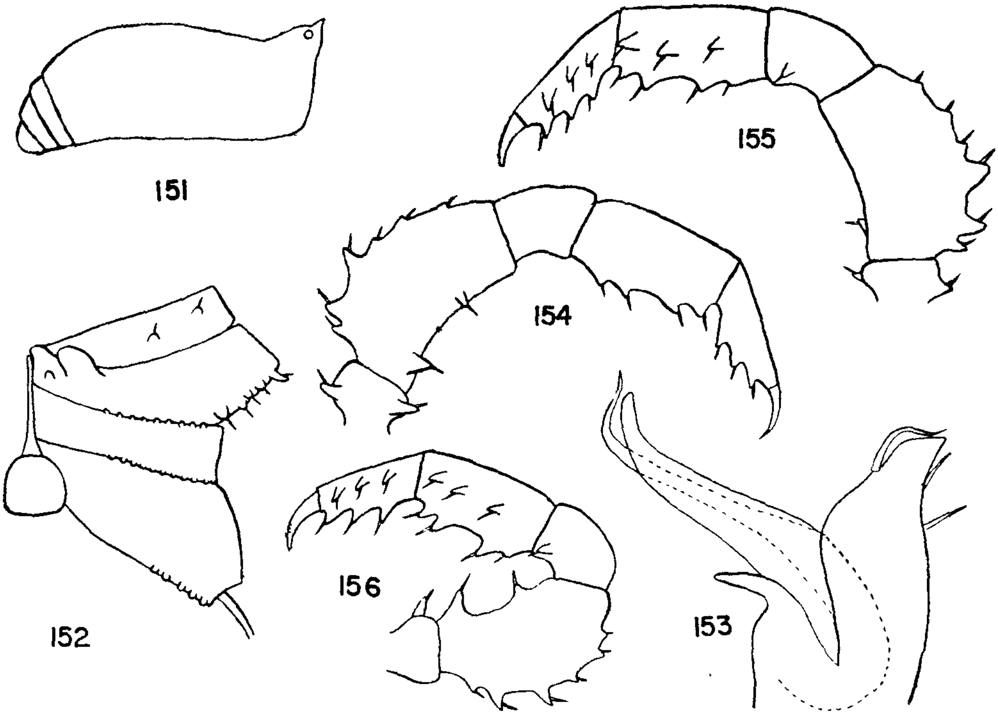
Nuncia (Nuncia) arcuata aorangiensis n.s.sp.

Figs. 151–156

Male

Colour. As with *arcuata* but with the addition of a black triangular patch with three pairs of orange spots on the median surface of the scute.

Body. Scute finely and closely granulate. The eyemound is similar in structure to *arcuata* but the apical spinous process is much shorter (Fig. 151). The scute behind the eyemound is evenly rounded and lacks a scutal groove. The maxillary lobes of



FIGS. 151–156 *Nuncia* (*Nuncia*) *arcuata aorangiensis* n.s.sp.
Fig. 151 Lateral view of body; Fig. 152 Coxal region of male; Fig. 153 Male genitalia; Fig. 154 Retro-lateral surface male pedipalp; Fig. 155 Pro-lateral surface of male pedipalp; Fig. 156 Pro-lateral surface female pedipalp.

coxae 2 with a strong secondary lobe on the proximal surface and a small tubercle on the median surface (Fig. 152.)

Genitalia. Similar in structure to *arcuata* as shown in Fig. 153. The apical portion of the aedeagus is curved. The superior seta is long and curved, extending beyond the distal portion of the plate. The two inferior setae are equal in length, longer than in *arcuata*.

Chelicerae. Similar in structure to *arcuata*.

Pedipalps. Similar in structure to *arcuata* but tubercles smaller (Figs. 154, 155).

Legs. Coxae as shown in Fig. 152. The tubercles on the retro-ventral surface of coxa 2 are low and rounded, except for a small conical tubercle on the distal surface. The pro-ventral surface of coxa 4 is smooth. Tarsal formula 3.5–6.4.4.

Measurements

Scute Length 2.20 Width 1.85

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.44	0.22	0.88	0.44	0.62	0.75	0.57	3.92
Leg 2 ..	0.84	0.26	1.14	0.57	0.97	1.19	0.92	5.89
Leg 3 ..	0.66	0.22	0.70	0.40	0.70	0.97	0.62	4.27
Leg 4 ..	0.97	0.31	1.06	0.66	1.06	1.32	0.70	6.08
Pedipalp ..		0.18	0.84	0.35	0.53		0.48	2.38
Chelicera ..	Basal	0.66	Second	0.88				1.54

Female. Similar in structure to male. Secondary lobes absent from the maxillary lobes. Pedipalps smaller but disposition of tubercles similar (Fig. 150).

Measurements

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
	Scute	Length 2.24		Width 2.07				
Leg 1 ..	0.53	0.22	0.62	0.37	0.62	0.62	0.44	3.42
Leg 2 ..	0.70	0.26	0.88	0.53	0.79	0.97	0.66	4.79
Leg 3 ..	0.66	0.22	0.57	0.44	0.53	0.70	0.48	3.60
Leg 4 ..	0.88	0.31	0.92	0.53	0.88	0.97	0.62	5.11
Pedipalp ..		0.18	0.62	0.26	0.53		0.40	1.99
Chelicera ..	Basal	0.44	Second	0.79				1.23

Types. Holotype male, Aorangi, Feilding, December 26, 1949, R. R. Forster (D.M.2/370); Allotype female, same data (D.M.2/380); Paratypes: same data, 8 ♂, 8 ♀ (C.M.A. 277; 2 ♀, D.M.2/381); same locality, November 11, 1947, R. R. Forster, 1 ♂ (D.M.2/382); August 21, 1948, R. R. Forster, 1 ♂ (C.M.A. 279); January 6, 1952, R. R. Forster, 3 ♂, 1 ♀ (C.M.A. 278).

Records. Totara Reserve, Manawatu, August 21, 1948, 2 immature, R. R. Forster (C.M.A. 280).

Remarks. This subspecies is closely related to *arcuata* differing mainly in the sturcture of the eyemound and the absence of a maxillary process.

Nuncia (Nuncia) stabilis n.sp.

Figs. 157–162

Male

Colour. Scute light brown with indistinct dark markings. Chelicerae and pedipalps a uniform pale yellow.

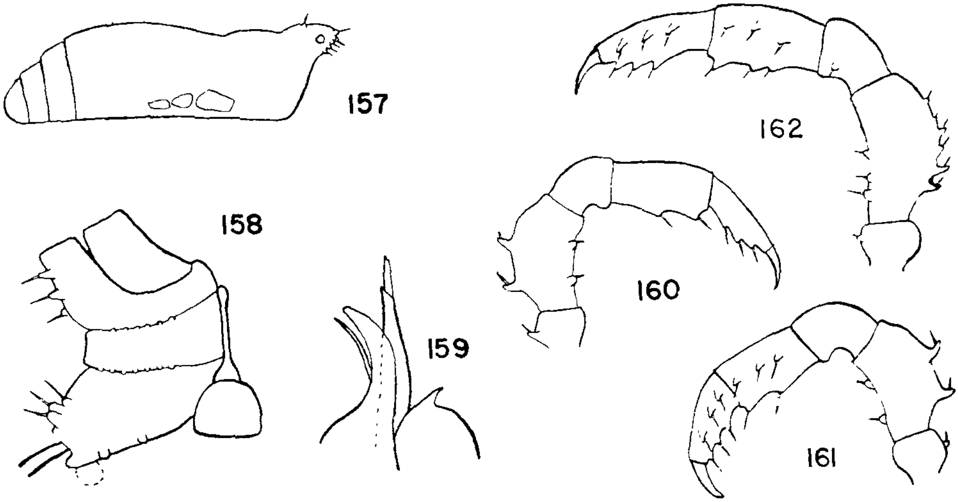
Body. Scute and free tergites closely granulate. The eyemound is directed forward from near the anterior margin of the carapace; it is conical in shape and provided with a single pustule on the mid-posterior surface and a group of similar pustules on the antero-distal surface (Fig. 157). There is a shallow scutal groove, the tergal region rises only slightly above the level of the carapace. There are three indented areas on each lateral margin of the scute where the cuticle appears to be much thinner than is normal for the rest of the scute (Fig. 158). The maxillary lobes of coxae 4 are simple as shown in Fig. 158.

Genitalia. As shown in Fig. 159. The aedeagus is slender and enclosed by a sheath which does not extend to the apex. There is a single inferior seat, which is situated on the median surface and extends to the apex of the ventral plate. Superior seta absent.

Chelicerae. Basal segment with a shallow proximo-dorsal groove beyond which is a small tubercle. Otherwise both segments are smooth.

Pedipalps (Figs. 160, 161). Trochanter with a small dorsal tubercle. Two strogn dentiform tubercles on the dorsal surface of the femur and two small rounded tubercles on the ventral surface. There are two small tubercles on the retro-ventral surface of the tibia; three on pro-dorsal surface of tibia and both ventral margins of the tarsus.

Legs. Coxae as shown in Fig. 158. There are three conical tubercles on both the retro-lateral surface of coxa 2 and the pro-ventral surface of coxa 4. Femora of all legs with a few setose pustules on the ventral surface. Tarsal formula 2.4.4.4. The distal Trasal segment of leg 1 is greatly swollen. The calcaneus and astragalus are sub-equal.



FIGS. 157–162 *Nuncia* (*Nuncia*) *stabilis* n.sp.
Fig. 157 Lateral view of body; Fig. 158 Coxal region of male; Fig. 159 Male genitalia; Fig. 160 Retro-lateral surface male pedipalp; Fig. 161 Pro-lateral surface male genitalia; Fig. 162 Pro-lateral surface female pedipalp.

Measurements

Scute Length 1.89 Width 1.50

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.44	0.14	0.66	0.31	0.48	0.40	0.66	3.09
Leg 2 ..	0.75	0.22	0.84	0.40	0.66	0.57	0.88	4.32
Leg 3 ..	0.53	0.18	0.48	0.31	0.48	0.35	0.48	2.81
Leg 4 ..	0.79	0.26	0.62	0.48	0.62	0.70	0.66	4.13
Pedipalp ..		0.18	0.48	0.22	0.35		0.31	1.54
Chelicera ..	Basal	0.53	Second	0.88				1.41

Female. Similar in structure with the male, but larger. Femur of the pedipalp with six dentiform tubercles on the dorsal surface and three rounded tubercles on the ventral surface (Fig. 162).

Measurements

Scute Length 2.42 Width 1.85

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.44	0.18	0.70	0.40	0.57	0.53	0.62	3.44
Leg 2 ..	0.75	0.22	0.92	0.53	0.88	0.88	0.97	5.15
Leg 3 ..	0.62	0.22	0.66	0.35	0.53	0.48	0.53	3.39
Leg 4 ..	0.88	0.26	0.88	0.53	0.75	0.75	0.66	4.71
Pedipalp ..		0.18	0.48	0.35	0.40		0.40	1.81
Chelicera ..	Basal	0.48	Second	0.84				1.32

Types. Holotype male, Te Aroho Mountain, 2,500 feet, May 3, 1946, J. T. Salmon (D.M.2/370); Allotype female, Akatarawa Divide, 1,500 feet, January 3, 1947, J. T. Salmon (D.M.2/372); Paratypes: Te Aroho Mountain, 2,500 feet, May 3, 1946, J. T. Salmon, 1 ♂ (D.M.2/371); Rotorua, 1926, R. E. R. Grimmett, 1 ♂ (D.M.2/373); Taniwha Stream, East of Te Kauwhata, May 3, 1948, A. J. Healy (D.M.2/374).

Sub-genus *CORINUNCIA* n.sub.-gen.

Aedeagus without a sheath, paired lateral branches not pectinate. Scute often coriaceous; eyemound smooth without apical tubercles. Maxillary lobes of coxae 2 smooth or with secondary processes in the male, never in the form of small granules.

Subgenotype *Triaenonyx coriaceus* Pocock 1903

Key to Males of the Sub-genus Corinuncia

1. Scutal groove absent 2
   Scutal groove absent 6
2. Lateral processes of aedagus spiniform 3
   Lateral processes of aedagus present as flattened plates .... *levis* n.sp.
3. Apical portion of aedagus beyond the lateral processes slender and spiniform ... 4
   Not as above 5
4. Eyemound rising directly up from the anterior margin of the carapace .... *coriacea* (Pocock)
   Eyemound set back from the anterior margin of the carapace .... *coriacea cockayni* (Hogg)
5. Distal portion of aedagus stouter than lateral processes and terminated sharply, ... *variagata delli* n.s.sp.
   Distal portion of aedagus more slender than lateral processes; and distended, ... *variagata australis* n.s.sp.
6. Eyes placed on a prominent eyemound 7
   Eyes on median surface of the carapace but not placed on an eyemound, ... *elongata* n.sp.
7. Aedeagus terminating sharply 8
   Not as above 15
8. Superior setae of ventral plate serrate 9
   Superior setae of ventral plate smooth 10
9. Eyemound evenly rounded; strong conical tubercle present on mid-ventral surface of pedipalp femur .... *sublaevis* (Pocock)
   Eyemound with a shallow apical indentation. Small rounded tubercle present on the mid-ventral surface of pedipalp femur .... *smithi* (Hogg)
10. Scute smooth. Tarsus of leg 1 4–segmented 11
    Scute with few small tubercles. Tarsus of leg 1 3–segmented 13
11. Eyemound evenly rounded; distal portion of aedagus slender 12
    Eyemound with small apical tubercle; distal portion of aedagus stout, ... *frustrata* n.sp.
12. Two equal sized tubercles present on the proximo-ventral surface of pedipalp femur .... *stewartia* (Hogg)
    Two unequal tubercles present on proximo-ventral surface of pedipalp femur, ... *stewartia tumosa* n.s.sp.
13. Distal portion of aedeagus bent back and then curved forward 14
    Distal portion of aedeagus curved evenly forward .... *nigriflava* (Roewer)
14. Pedipalp femur with three small tubercles on the mid-ventral surface .... *nigriflava parva* (Phillipps and Grimmett)
    Pedipalp femur with a single small tubercle on the mid-ventral surface, ... *nigriflava parvocula* n.s.sp.

15. Eyemound low and evenly rounded....................................*planocula* n.sp.
Eyemound with a small apical peak...*pallida* n.sp.

Nuncia (Corinuncia) coriacea (Pocock, 1903)

1903 *Triaenonyx coriaceus* Pocock, Proc.Zool.Soc.London, p.403.
1914 *Nuncia coriacea* (Pocock), Roewer,Arch.Naturg.80A(12), p.78.
1920 *Triaenonyx coriacea* (Pocock), Hogg,Proc.Zool.Soc.London, p.39.
1923 *Nuncia nigriflava* (Loman), (Part), Roewer,Die Weberknechte der Erde, p.592.

Figs. 163–168

Male Form A

Colour. The ground colour of the scute is a deep reddish-brown almost obscured by dark-brown shading (some specimens appear almost black), and with three transverse rows of pale reddish-brown spots across the tergal region and a similar row on each free tergite. The sternites are reddish-brown with a median longitudinal black band. The dorsal surfaces of the chelicerae and pedipalps are covered with black reticulate markings.

Body. The scute is coarsely coriaceous, with numerous somewhat irregularly spaced low tubercles on the tergal region. The eyemound is rounded, it rises steeply up from the anterior margin of the carapace but slopes more gently back behind the eyes, wider than high in ratio of 11:6. There is no scutal groove present (Fig. 163). The free tergites are coriaceous, each with a transverse row of low granules. The maxillary lobes are simple as shown in Fig. 164.

Genitalia. The aedeagus is stout proximally, but with a slender apical portion at the base of which is a pair of slender accessary processes (Fig. 165). The ventral plates are paired, each provided with a short, stout, smooth superior seta, and three inferior setae of which the proximal is the strongest.

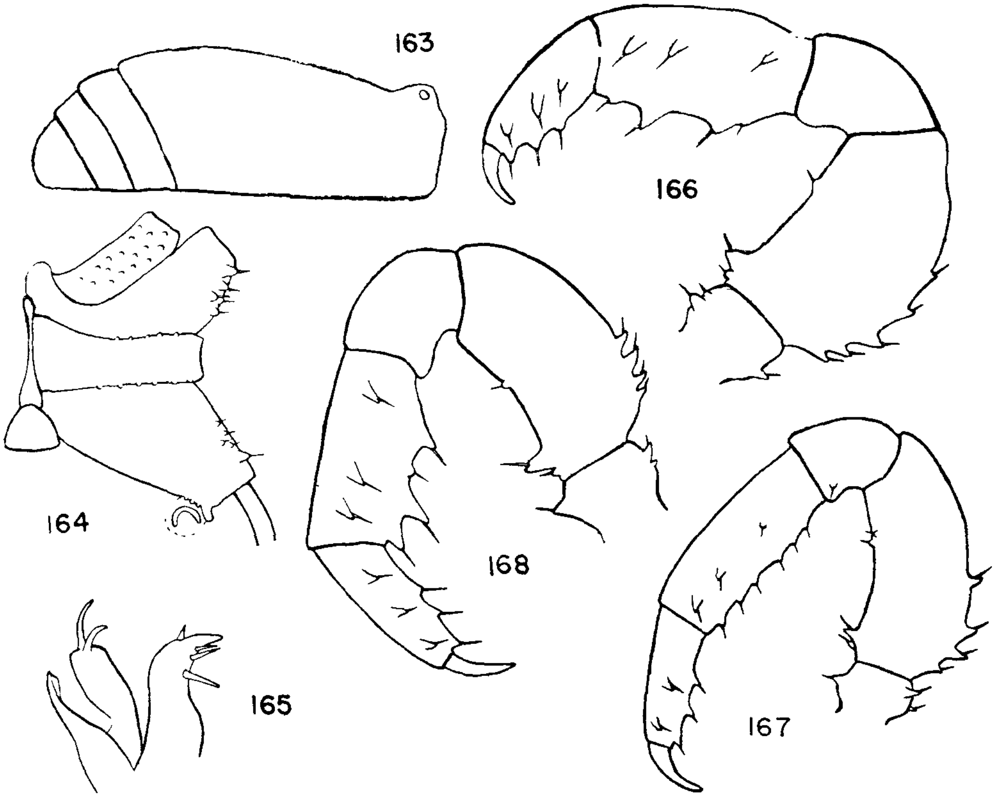
Chelicerae. Basal segment with a shallow proximo-dorsal groove, few small granules present on surface immediately beyond the groove. Second segment with from 3–4 low tubercles on the dorsal surface.

Pedipalps (Fig. 167). Patella with two small dorsal and a single ventral tubercle. There are four dentiform tubercles on the proximal half of the dorsal surface of the femur, the fourth widely separated. Two small dentiform tubercles on proximo-ventral and two even smaller rounded tubercles on the ventral surface at about two-thirds of the length of the segment. Patella with a small tubercle on both pro- and retro-lateral surfaces. The tibia is relatively slender with six small rounded tubercles on the retro-ventral margin and three stronger, more spiniform tubercles on the pro-ventral margin. Tarsus with two small spiniform tubercles on the pro-ventral and three on the retro-ventral margins.

Legs. Coxae as shown in Fig. 164. The remaining segments of the legs with a few granules. Tarsal formula 3.8–9.4.4.

Measurements

	Scute		Length 4.71		Width 3.74			
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	1.36	0.48	1.85	0.88	1.41	1.58	1.36	8.92
Leg 2	1.85	0.66	2.68	1.10	1.98	2.11	3.08	13.46
Leg 3	1.45	0.57	1.50	0.70	1.10	1.32	1.50	8.14
Leg 4	1.85	0.66	2.38	0.88	1.72	2.38	1.80	11.67
Pedipalp		0.48	1.85	0.75	1.63		1.01	5.72
Chelicera	Basal	1.54	Second	2.02				3.56



FIGS. 163–168 *Nuncia* (*Corinuncia*) *coriacea* (Pocock)
Fig. 163 Lateral view of body; Fig. 164 Coxal region of male; Fig. 165 Male genitalia; Fig. 166 Pro-lateral surface pedipalp "Form A" male; Fig. 167 Pro-lateral surface pedipalp "Form B" male; Fig. 168 Pro-lateral surface female pedipalp.

Male Form B. Similar in general structure to Form A differing as follows:—The dorsal surface of the second segment of the chelicera is smooth. The pedipalps are as shown in Fig. 166, stouter than Form A, with three tubercles on the retro-ventral margin of the tibia of which the median is spinous, and with three spinous tubercles on the pro-ventral margin of the tarsus.

Measurements

Scute Length 3.92 Width 3.52

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.97	0.48	1.36	0.84	1.28	1.23	1.19	7.35
Leg 2 ..	1.54	0.48	1.85	1.10	1.67	1.98	2.42	11.04
Leg 3 ..	1.28	0.44	1.23	0.48	1.23	1.54	1.63	7.83
Leg 4 ..	1.76	0.66	2.16	0.97	1.54	2.24	1.98	11.31
Pedipalp ..		0.31	1.32	0.70	1.10		0.88	4.31
Chelicera ..	Basal	0.75	Second	1.32				2.07

Female. Usually darker than male and scute more coarsely coriaceous. The pedipalps are similar to Form B male, but more slender and with the tubercles on the retro-ventral margin of the tibia more strongly developed as shown in Fig. 168.

Measurements

Scute Length 4.45 Width 3.87

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.23	0.53	1.50	0.84	1.10	1.32	1.14	7.66
Leg 2 ..	1.72	0.62	2.20	1.14	1.76	2.07	2.20	11.71
Leg 3 ..	1.45	0.57	1.28	0.88	1.10	1.54	1.41	8.23
Leg 4 ..	1.85	0.70	1.98	1.14	1.58	2.77	1.89	11.91
Pedipalp ..		0.26	1.10	0.53	1.01		0.70	3.60
Chelicera ..	Basal	1.01	Second	1.41				2.42

Types. Holotype female, "New Zealand", collected D. A. Steel in British Museum of Natural History, London (not seen).

Records. Titirangi, Auckland, August 24, 1948, T. E. Woodward, 1 ♀ (C.M.A. 602); same locality, March 17, 1949, T. E. Woodward, 2 ♂(B), (C.M.A. 606); same locality, December 2, 1950, T. E. Woodward, 2 ♂(1A, 1B); 2 ♀ (C.M.A. 651); Manurewa, Auckland, May 29, 1943, R. R. Forster, 2 ♂(1 A, 1 B), 1 ♀ (D.M.2/598; 2/759); Waitakere Hills, June 14, 1943, R. R. Forster, 1 ♀ (D.M.2/599); Kaiwaka, December, 1948, R. A. Cumber, 4 ♂ (3 A, 1 B), 4 ♀ (C.M.A. 67, D.M.2/187); Little Barrier Island, November 16, 1949, E. W. Dawson, 1 ♂ (A), 1 ♀ (C.M.A. 448); Motuihi Island, May 22, 1943, R. R. Forster, 2 ♀ (D.M.2/743, 2/862).

Remarks. Pocock (1903) when establishing this species described and figured specimens he considered to be male and female. It is clear from both the description and figures that he was dealing with two distinct species. I have selected the female description as being that of the holotype and have placed the specimens which I have examined accordingly. The male specimen would probably on examination prove to be *Nuncia* (*Nuncia*) *obesa grimmetti.* Roewer (1923) when revising the world fauna, placed *coriacea* in synonymy with *Nuncia nigriflava* (Loman). Fortunately I have been able to examine Loman's type material and have re-established *coriacea* as a distinct species.

Nuncia (Corinuncia) coriacea cockayni (Hogg, 1920)

1920 *Triaenonyx cockayni,* Hogg.Proc.Zool.Soc.Lond., p.39.
1931 *Nuncia sperata* (Loman) (Part), Roewer,Zeits.f.Zool.138,(1), p.151.

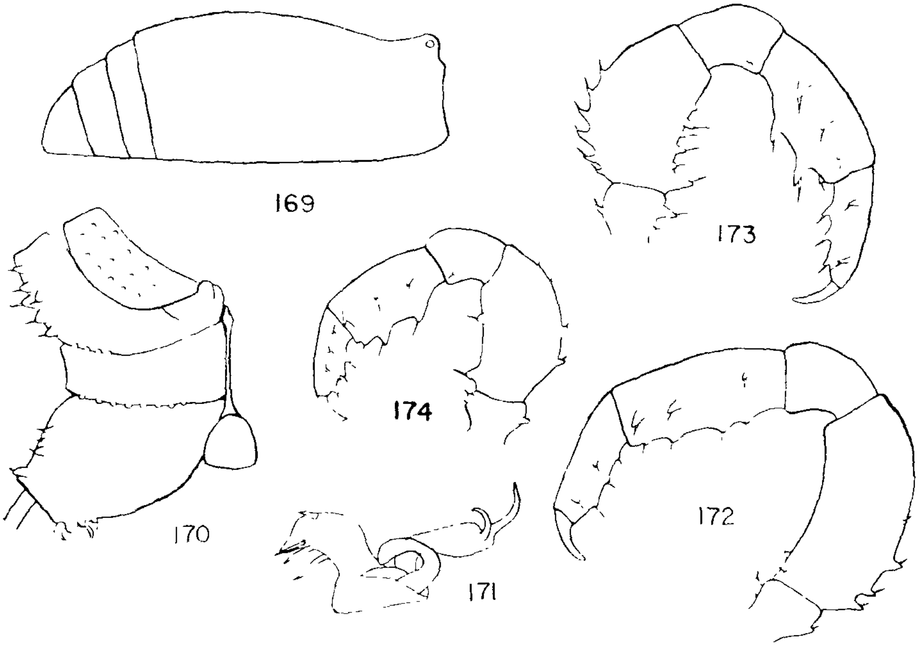
Figs. 169–174

Male Form A. Similar in general structure to *coriacea* (Fig. 169) but differing mainly in the structure of the pedipalp, which possesses three dentiform tubercles on the proximo-dorsal surface of the femur, two minute rounded tubercles on the proximo-ventral surface and lacks tubercles on the remaining ventral surface (Fig. 172). There are four small rounded tubercles on the retro-ventral surface of the tibia and the three tubercles on the retro-ventral margin of the tarsus are smaller. The genitalia is similar to *coriacea* but distal portion of aedeagus and lateral processes are relatively longer (Fig. 171). The coxae of the legs are as shown in Fig. 165. The eyemound rises sharply up from the anterior margin of the carapace (Fig. 164).

Measurements

Scute Length 4.72 Width 3.61

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.10	0.48	1.72	0.88	1.28	1.32	1.28	8.06
Leg 2 ..	1.80	0.66	2.29	1.10	1.94	2.29	2.86	12.94
Leg 3 ..	1.41	0.48	1.32	0.70	1.14	1.63	1.58	8.26
Leg 4 ..	1.85	0.66	1.85	1.14	1.63	2.68	2.02	11.83
Pedipalp ..		0.37	1.58	0.84	1.28		1.06	5.13
Chelicera ..	Basal	1.01	Second	1.79				2.80



FIGS. 169–174 *Nuncia (Cornuncia) coriacea cockayni* (Hogg)
Fig. 169 Lateral view of body; Fig. 170 Coxal region male; Fig. 171 Male genitalia; Fig. 172 Pro-lateral surface pedipalp of "Form A" male; Fig. q73 Pro-lateral surface pedipalp "Form B" male; Fig. 174 Pro-lateral surface female pedipalp.

Male Form B. Pedipalp differing from *coriacea* by possessing 4–5 more small tubercles on the proximal half of the ventral surface of the tibia (Fig. 173). Scute more coriaceous than Form A.

Measurements

		Scute	Length 3.99		Width 3.52			
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.10	0.44	1.54	0.70	1.23	1.41	1.10	7.52
Leg 2 ..	1.89	0.62	2.24	1.10	1.94	1.98	2.64	12.41
Leg 3 ..	1.45	0.57	1.50	0.88	1.10	1.63	1.58	8.71
Leg 4 ..	1.80	0.70	2.33	1.18	1.76	2.77	2.20	12.74
Pedipalp ..		0.53	1.28	0.57	0.92		0.88	4.18
Chelicera ..	Basal	0.88	Second	1.45				2.33

Female. As in *coriacea* but with only two dentiform tubercles on the proximal half of the dorsal surface of the pedipalp femur (Fig. 174).

Types. Syntypes, 1 ♂, 3 ♀, Kapiti Island, L. Cockayne in British Museum, Natural History—Syntype ? 1 ♂ (B); same data (C.M.A. 63).

Records

North Island. Kapiti Island, May, 1947, R. R. Forster, 1 ♂ (B) (C.M.A. 64); Karori, Wellington, August 2, 1941, R. R. Forster, 2 ♂ (B), 6 ♀ (D.M.2/570); same locality, July 12, 1942, 2 ♂ (B), 1 ♀ (D.M.2/576); same locality, June 16, 1941, 2 ♂ (B), 3 ♀ (D.M.2/577); same locality, April 26, 1946, R. R. Forster, 1 ♂ (B) (D.M.2/744); Botanical Gardens, Wellington, 1920, R. E. R. Grimmett, 2 ♂ (B), 2 ♀ (D.M.2/580);

Wiltons Bush, Wellington, March 20, 1920, J. G. Myers, 2 ♀ (D.M.2/590); Kelburn, Wellington, October 5, 1937, R. Button, 1 ♀ (D.M.2/583); Days Bay, Wellington, November 16, 1941, R. R. Forster, 2 ♀ (D.M.2/585); same locality, September 18, 1941, R. R. Forster, 1 ♂ (B), 1 ♀ (D.M.2/702); same locality, July 19, 1941, R. R. Forster, 2 ♀ (D.M.2/861); Butterfly Creek, Wellington, January 29, 1948, E. W. Dawson, 1 ♂ (B) (C.M.A. 446); Johnsonville, December 5, 1941, J. T. Salmon, 1 immature (D.M.2/588); Waikanae, February 6, 1943, R. R. Forster, 2 ♀ (D.M. 2/584); Rimutuka District, August 10, 1942, R. R. Forster, 1 ♂ (B) (D.M.2/575); Hector Track, Tararua Range, August 20, 1921, R. E. R. Grimmett, 2 ♀ (D.M.2/762); Orongorongo, December 6, 1920, R. E. R. Grimmett, 1 ♂ (B), 1 ♀ (D.M.2/700); Akatarawa, January 1, 1943, R. R. Forster, 1 ♂ (B) (D.M.2/692); Turanganui, Wairarapa, November 4, 1951, A. C. O'Connor, 5 ♂, 24 ♀ (C.M.A. 700); same locality, July ,1948, A. C. O'Connor, 5 ♂ (1 A, 4 B), 6 ♀ (C.M.A. 439); Ngahape, April 29, 1947, K. Lee, 1 ♀ (D.M.2/559); Mount Ross, Wairarapa, April 5, 1947, R. R. Forster, 1 ♂ (A), 3 ♀ (D.M.2/190); Pangaroa, November 17, 1946, J. H. Sorensen, 2 ♂ (A), 2 ♀ (D.M.2/572); Mangarei, October, 1940, C. L. Wilton, 1 ♂ (A), 1 ♀ (D.M.2/567); Feilding, November 9, 1947, R. R. Forster, 2 ♂ (A), 13 ♀ (D.M.2/563); same locality, December 26, 1949, R. R. Forster, 3 ♂ (1 A, 2 B), 1 ♀ (C.M.A. 664); Kitchener Park, Feilding, October, 3, 1942, R. R. Forster, 4 ♂ (B), 7 ♀ (D.M.2/852); Apiti, October 12, 1949, R. Foord, 1 ♀ (C.M.A. 443); Dannevirke, July 19, 1942, R. R. Forster, 1 ♂ (A), 1 ♀ (D.M.2/581); Clifton, Hawke's Bay, April 1, 1947, R. R. Forster, 2 ♂ (B), 1 ♀ (D.M.2/490); Te Awanga, Hawke's Bay, April 1, 1947, R. R. Forster, 4 ♂ (B) (D.M.2/489); Fernhill, Hawke's Bay, March 15, 1943, R. R. Forster, 1 ♂ (B) D.M.2/491); Westmere, Wanganui, November 9, 1948, J. M. Moreland, 1 ♀ (C.M.A. 661); Taoroa, Rangitikei, February, 1950, A. C. O'Connor, 12 ♂ (8 A, 4 B), 17 ♀ (C.M.A. 440); Lake Taupo, December 11, 1949, C. Rawlings, 1 ♀ (C.M.A. 442); Turangi, Lake Taupo, April, 1951, A. C. O'Connor, 5 ♂ (3 A, 2 B), 6 ♀ (C.M.A. 637); Utukoa, April, 1951, A. C. O'Connor, 2 ♀ (C.M.A. 638).

South Island. Inner Chetwode Island, September 11, 1948, R. K. Dell, 1 ♀ (D.M.2/595); Buller Gorge, January 5, 1944, A. W. Parrott, 1 ♂ (B), 2 ♀ (C.M.A. 457); Methven, August 27, 1950, R. C. Cranfield, 1 ♂ (B) (C.M.A. 456); Arthur Pass, April 9, 1950, R. Jenkin, 2 ♂ (A), 3 ♀ (C.M.A. 88; D.M.2/203); Halpin's Creek, Arthur Pass, January 7, 1949, E. W. Dawson, 1 ♂ (A) (C.M.A. 87); Weka Pass, January 12, 1948, B. J. Marples, 1 ♀ (A) C.M.A. 676); Ashley Gorge, November 12, 1945, A. W. Parrott, 1 ♀ (B), 1 ♂ (C.M.A. 452); Oxford, 1928, A. W. Parrott, 1 ♀ (C.M.A. 458); Springfield, June, 1952, M. Warren, 2 ♀ (C.M.A. 705); Kennedy's Bush, Christchurch, November 30, 1949, R. R. Forster, 2 ♂ (1 A, 1 B) (C.M.A. 454); Botanic Gardens, Christchurch, April 6, 1949, E. W. Dawson, 4 ♀ (C.M.A. 451); November 30, 1949, R. R. Forster (C.M.A. 454); Kennedy's Bush, January 12, 1944, J. T. Salmon, 1 ♂ (A) (D.M.2/600); Kaituna Valley, September 11, 1949, R. R. Forster, 1 ♂ (B), 4 ♀ (C.M.A. 453); same locality, August 10, 1948, R. R. Forster, 1 ♂ (B), 4 ♀ (C.M.A. 80); Okuti Valley, December 10, 1950, R. R. Forster, 3 ♂ (2 A, 1 B), 6 ♀ (C.M.A. 608); Akaroa, October 14, 1949, R. R. Forster, 1 ♂ (B), 2 ♀ (C.M.A. 455); Kakahu, Geraldine, April 30, 1950, R. R. Forster, 4 ♂ (B), 7 ♀ (C.M.A. 556); Waiho, South Canterbury, December 13, 1939, A. W. Parrott, 3 ♂ (B), 19 ♀ (C.M.A. 554); Temuka, August 22, 1939, B. J. Marples, 4 ♀ (C.M.A. 553).

Remarks. Roewer (1931) placed *cockayni* as a synonym of *Nuncia sperata* Loman. However, *sperata* is now recognised as a synonym of *Triaenonyx obesus* which is placed in the sub-genus *Nuncia*.

Nuncia (Corinuncia) variegata (Hogg, 1920)

1920 *Triaenonyx variegata* Hogg, Proc.Zool.Soc.London, p.40

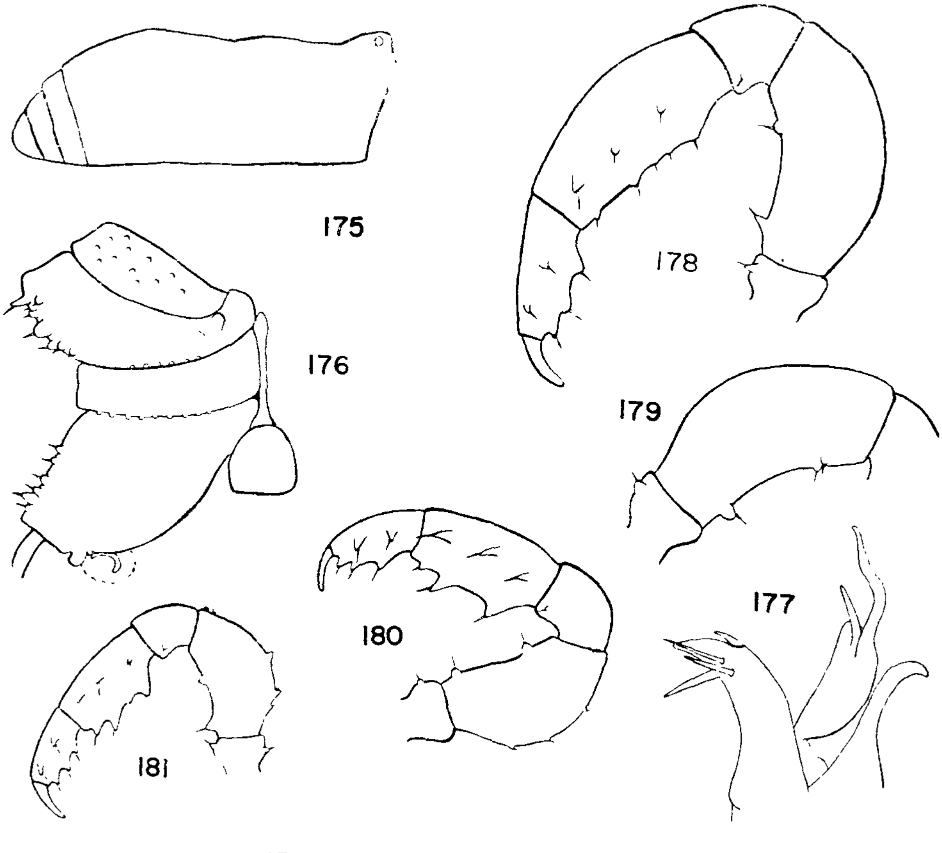
Figs. 175–181

Male Form A

Colour. Ground colour of the scute reddish-brown, but heavily shaded with dark-brown, forming reticulate markings on the anterior surface. Free tergites blackish with a transverse row of pale brown spots. Sternites reddish-brown with small irregular black patches. Dorsal surfaces of chelicerae and pedipalps with black reticulate markings.

Body. Scute coriaceous, with low tubercles on the tergal region. Eyemound relatively low, width at base equals three times the height; rising sharply up from immediately behind the anterior margin of the carapace, but sloping more gently back behind the eyes (Fig. 175). There is a very faint scutal groove present. Maxillary lobes of coxae 2 with a small rounded secondary lobe (Fig. 176).

Genitalia. As shown in Fig. 177. The lateral processes of the aedeagus are long, distal portion long and sinuous, as long as the proximal portion. Ventral plates with a



FIGS. 175–181 *Nuncia (Corinuncia) variegata* (Hogg)

Fig. 175 Lateral view of body; Fig. 176 Coxal region of "Form A" male; Fig. 177 Male genitalia; Fig. 178 Pro-lateral surface pedipalp "Form A" male; Fig. 179 Retro-lateral surface trochanter and femur pedipalp "Form A" male; Fig. 180 Pro-lateral surface pedipalp "Form B" male; Fig. 181 Pro-lateral surface female pedipalp.

single superior, and three inferior setae; superior seta short and stout, inferior setae sub-equal in length but I.1 much stouter and directed out at right angle from the ventral surface of the plate.

Chelicerae. Both segments relatively stout. Basal segment with a deep proximo-dorsal groove and a sharp lobe on the inner disto-dorsal surface. Second segment smooth apart from a few minute tubercles on the dorsal surface.

Pedipalps (Figs. 178, 179). Small tubercle present on both dorsal and ventral surfaces of the trochanter. Dorsal surface of femur smooth; three small tubercles on the ventral surface, one proximal and two at about three-quarters. Tibia stout, with three small tubercles on the pro-ventral surface and five retro-ventral of which the second and third are minute. Tarsus with two pro- and three retro-ventral tubercles.

Legs. Coxae as shown in Fig. 176. Few small tubercles present on the femora and tibia of all legs. Tarsal formula 3.11–13.4.4.

Measurements

Scute Length 4.17 Width 3.30

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	1.14	0.48	1.76	0.88	1.32	1.58	1.54	8.70
Leg 2	1.85	0.62	2.51	1.10	1.98	2.42	2.95	13.43
Leg 3	1.41	0.57	1.54	0.75	1.23	1.80	1.45	8.75
Leg 4	1.98	0.62	2.24	1.14	1.76	3.08	2.02	12.84
Pedipalp		0.40	1.76	0.48	1.76		0.92	5.32
Chelicera	Basal	1.36	Second	1.98				3.34

Male Form B

Colour. The scute is darker than in the male; the transverse rows of low tubercles on tergal areas 2–4 show as orange spots.

Body. The scute is more coarsely coriaceous, and a scutal groove is lacking. There are transverse rows of low tubercles on areas 2–5 and the free tergites. The maxillary lobes of coxae 2 are smooth.

Chelicerae. As in Form A but more slender.

Pedipalps (Fig. 180). Smaller than in Form A, spination differs as follows:—There are three small dentiform tubercles along the dorsal surface of the femur; and three spiniform tubercles along the retro-ventral surface of the tibia, the third being small, pro-ventral tubercles more strongly developed.

Legs. As in Form A. Tarsal formula 3.9–10.4.4.

Measurements

Scute Length 3.92 Width 3.08

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	0.88	0.44	1.41	0.84	1.23	1.23	1.41	7.44
Leg 2	1.63	0.48	2.02	0.97	1.76	2.11	2.46	11.43
Leg 3	1.14	0.53	1.32	0.66	1.14	1.50	1.36	7.65
Leg 4	1.58	0.62	1.94	1.14	1.63	2.60	1.76	11.27
Pedipalp		0.35	1.32	0.53	1.10		0.84	4.14
Chelicera	Basal	0.88	Second	1.54				2.42

Female. This is similar to the Form B male, differing only in the comparatively small pedipalps, which however have a similar spination.

Measurements

Scute Length 3.63 Width 3.17

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.84	0.40	1.32	0.66	1.06	1.19	1.14	6.61
Leg 2 ..	1.54	0.48	1.76	0.88	1.36	1.76	1.94	9.72
Leg 3 ..	0.97	0.44	1.10	0.66	0.97	1.14	1.10	6.38
Leg 4 ..	1.45	0.66	1.76	0.88	1.36	2.20	1.54	9.85
Pedipalp ..		0.35	1.10	0.44	0.88		0.44	3.41
Chelicera ..	Basal	0.88	Second	1.19				2.07

Types. Three females from the Hollyford River, one immature from Mount Remarkables, Lake Wakatipu, one from Mount Oakden, four males, two females from Paradise, Lake Wakatipu. (Hogg Collection, British Museum, Natural History.) It is apparent from the table published by Roewer (1931) of Hirst's revision of this material that all of the specimens were immature and hence little value can be placed on the determination of sex.

Records. Lake Manapouri, February 6, 1946, R. R. Forster, 4 ♂ (B), 3 ♀ (D.M.2/620); Lower Hollyford Valley, February 2, 1946, R. R. Forster, 4 ♂ (B), 2 ♀ (D.M.2/623); Anita Bay, Milford Sound, January 21, 1946, R. R. Forster, 4 ♂ (D.M.2/622); Anita Bay, Milford Sound, January 29, 1946, R. R. Forster, 2 ♀ (A) (D.M.2/613); Milford Sound, January 10, 1946, R. R. Forster, 2 ♂, 1 immature (D.M.2/611); Milford Sound, April 10, 1949, R. R. Forster, 2 ♀ (A) (C.M.A. 480); Homer, December 24, 1943, J. T. Salmon, 1 ♀ (A) (D.M.2/614); Caswell Sound, April 19, 1949, R. R. Forster, 11 ♀ (8A, 3B), 5 ♂ (C.M.A. 475); Stillwater Base, Caswell Sound, March 13, 1949, R. K. Dell, 5 ♂ (2 A, 3 B), 5 ♀ (D.M.2/609); Upper Stillwater, Caswell Sound, April 13, 1949, R. R. Forster, 3 ♂ (1 A, 2 B), 11 ♀ (C.M.A. 481); Leslie Clearing, Caswell Sound, March 15, 1949, R. K. Dell, 2 ♂ (A) (D.M.2/606).

Remarks. All of the specimens examined by Hogg (1920) were immature, but I have been able to re-examine some of his material and confirm the placing of the material listed above. The wide sternum featured by Hogg as a character which might be held to be of generic importance is to be found in the immature stages of all the New Zealand nunciaeform harvestmen.

Nuncia (Corinuncia) variegata granulata n.s.sp.

Figs. 182–187

Form A Male

Colour. Body reddish-brown with black markings as in *variegata.*

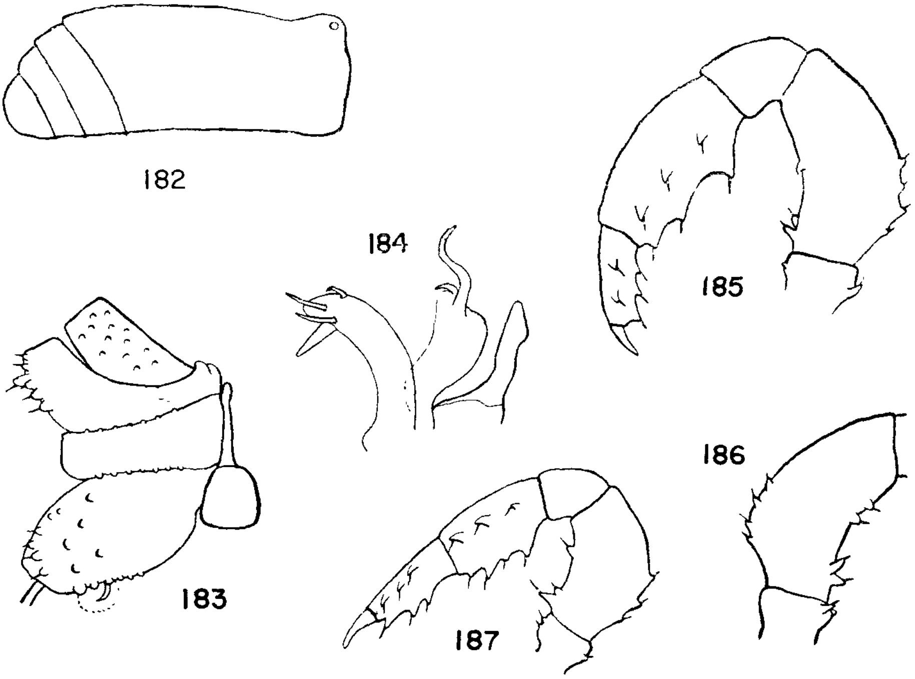
Body. Eyemound slightly more rounded than in *variegata.* Tergal region of the scute and free tergites shiny, with transverse rows of low tubercles which are more prominent than in *variegata.* Maxillary lobes of coxae 2 with a low proximal swelling but lacking the prominent process featured by *variegata* (Fig. 183).

Genitalia (Fig. 184). Apical portion of aedeagus more sinuous than in *variegata.* Setae relatively shorter.

Chelicerae. As in *variegata.*

Pedipalps (Figs. 185, 186). Femur with four dentiform tubercles on the dorsal surface and a pair of conical tubercles on the proximo-ventral surface. The tibia is less robust than *variegata* with three well developed tubercles on both pro- and retro-ventral surfaces.

Legs. As in *variegata.* Tarsal formula 3.7–9.4.4.



FIGS. 182–187 *Nuncia (Cornuncia) variegata granulata* n.s.sp.
Fig. 182 Lateral view of body; Fig. 183 Coxal region of male; Fig. 184 Male genitalia; Fig. 185 Pro-lateral surface pedipalp "Form A" male; Fig. 186 Retro-lateral surface trochanter and femur pedipalp of "Form A" male; Fig. 187 Pro-lateral surface female pedipalp.

Measurements

Scute Length 3.68 Width 2.86

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.81	0.38	1.25	0.64	1.01	1.08	1.09	6.26
Leg 2 ..	1.49	0.48	1.74	0.78	1.36	1.75	1.82	9.42
Leg 3 ..	1.13	0.51	1.11	0.63	0.84	1.19	1.11	6.52
Leg 4 ..	1.50	0.55	1.75	0.78	1.33	1.88	1.48	9.27
Pedipalp ..		0.43	1.62	0.62	1.36		0.75	4.78
Chelicera ..	Basal	0.91	Second	1.48				2.39

Form B Male. Scute more heavily shaded with black and somewhat granulate. Pedipalp smaller, tibia less robust, proximo-ventral tubercle of femur relatively stronger.

Measurements

Scute Length 3.75 Width 3.74

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.00	0.39	1.57	0.84	1.14	1.16	1.21	7.31
Leg 2 ..	1.51	0.57	2.10	1.10	1.63	2.13	2.25	11.29
Leg 3 ..	1.25	0.49	1.28	0.75	1.17	1.62	1.29	7.85
Leg 4 ..	1.64	0.51	1.86	1.16	1.62	2.14	1.55	10.48
Pedipalp ..		0.38	1.39	0.59	1.16		0.75	4.27
Chelicera ..	Basal	0.81	Second	1.22				2.03

Female. Coloration of scute as in Form B Male but in many specimens darker. Scute strongly granulate. Pedipalp small, armed with tubercles as shown in Fig. 187.

Measurements

Scute Length 4.17 Width 3.75

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.01	0.45	1.51	0.75	1.06	1.25	0.98	7.01
Leg 2 ..	1.49	0.53	2.11	1.10	1.63	1.98	2.04	10.88
Leg 3 ..	1.25	0.49	1.25	0.75	1.02	1.38	1.10	7.24
Leg 4 ..	1.70	0.63	2.00	1.12	1.61	2.50	1.28	10.84
Pedipalp ..		0.33	1.13	0.55	1 01		0.79	3.81
Chelicera ..	Basal	0.75	Second	1.25				2.00

Types. Holotype male, Halfmoon Bay, Stewart Island, August 10, 1948, O. Allan (C.M.A. 478); Allotype female same data (C.M.A. 478); Paratypes: Halfmoon Bay, Stewart Island, June, 1950, O. Allan, 2 ♀ (B) (C.M.A. 701); same locality, November 22, 1946, R. R. Forster, 3 ♂ (B), 2 ♀ (D.M.2/612); same locality, January 6, 1937, B. J. Marples, 1 ♀ (D.M.2/618); Horseshoe Bay, Stewart Island, November 30, 1946, R. R. Forster, 7 ♂ (B) (D.M.2/610); Maori Bay, Stewart Island, November 25, 1946, R. R. Forster, 1 ♂ (B) (D.M.2/621); Raroa Reserve, Stewart Island, October 30, 1948, R. K. Dell, 2 ♀ (D.M.2/607).

Records. Orepuki, May 17, 1949, J. H. Sorensen, 1 ♂ (A), 2 ♀ (C.M.A. 476); same locality, May 1, 1949, R. R. Forster and J. H. Sorensen, 2 ♂ (B), 8 ♀ (C.M.A. 483); Longwood Range, September 1, 1948, J. H. Sorensen, 4 ♂ (A), 5 ♀ (C.M.A. 479).

Remarks. This subspecies is closely related to the nominate form but is clearly separated from it by the structure of the pedipalp of the Form A male.

Nuncia (Corinuncia) variegata delli n.s.sp.

Figs. 188–193

Male

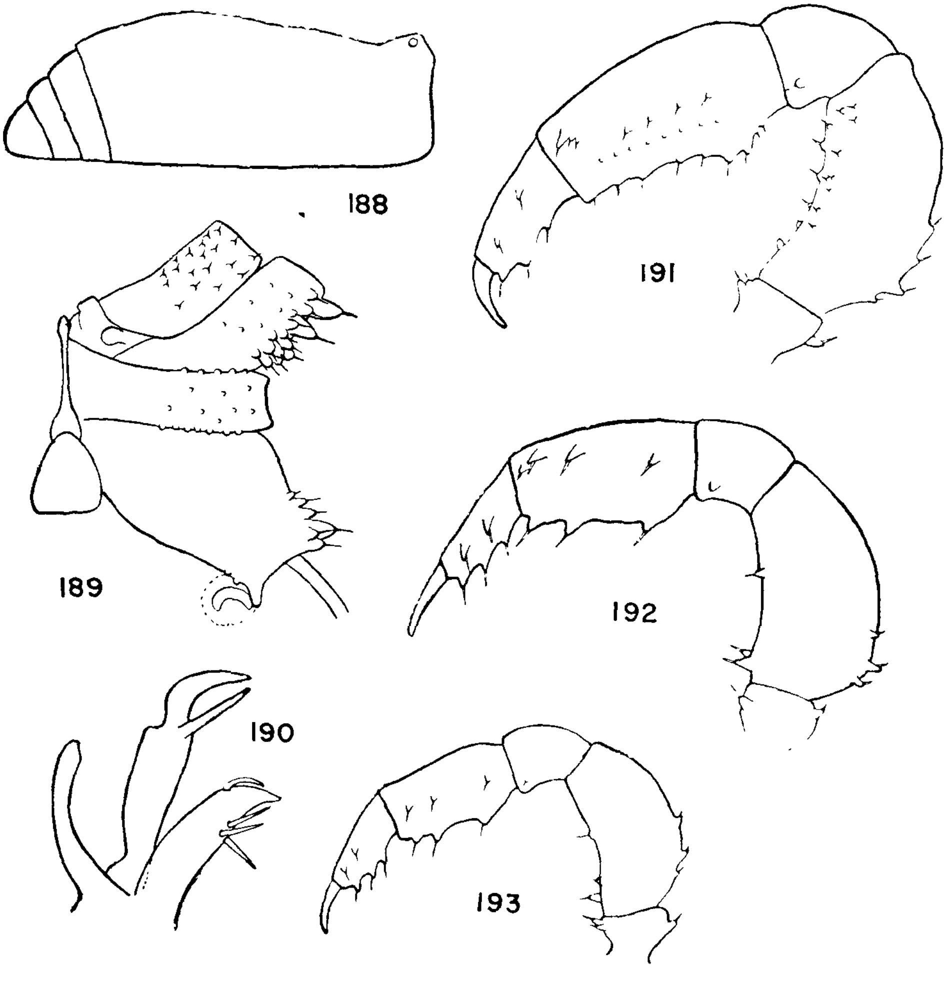
Colour. Ground colour of scute reddish-orange. Indistinct black bands extend back from each side of the median line behind the eyemound to merge in the middle line of the tergal region. There is a further indistinct black band extending along each lateral margin of the tergal area. The posterior margin of the scute and the free tergites are blackish, relieved by a transverse row of orange spots. The sternites are reddish-orange with black markings. The dorsal surfaces of the chelicerae and pedipalps and the ventral surface of the coxae of the legs are overlaid with black reticulate markings. The legs are light orange with irregular black markings.

Body. The scute is closely and finely granulate. The eyemound is rather low (Fig. 188). It slopes steeply up from the anterior margin of the carapace and gently down the posterior margin. The ratio of height to width is 7:13. The cephalothoracic carapace is separated from the tergal region by a faint depression (Fig. 188). A row of small granules extends along the free tergites; each granule is placed in the centre of an orange spot. A sub-rectangular plate, notched on the inner distal margin, projects forward on the proximal surface of the maxillary lobe of coxa 2 and there is a further smaller rounded lobe on the more distal surface (Fig. 189).

Genitalia (Fig. 190). The apical portion of the aedeagus is only slightly longer than the lateral processes and is stout. The setae of the ventral plates are situated as in *variegata* and *granulata*, but the proximal inferior seta is not differentiated.

Chelicerae. There is a shallow groove on the dorsal surface of the basal segment of the chelicera immediately beyond the anterior margin of the carapace. A small group of from three to four granules is present on the dorsal surface immediately beyond this groove and a further small tubercle is present on the disto-dorsal surface of the segment. There are a few small rounded tubercles on the dorsal surface of the second segment.

Pedipalps (Fig. 192). There are two small tubercles on the ventral surface of the trochanter and one larger tubercle on the dorsal surface. The femur is provided with four tubercles on the dorsal surface. The femur is provided with four tubercles on the proximal half of the dorsal surface, and a few small tubercles on the ventral surface, of which the two proximal tubercles, one on the ventral surface and one on the retro-ventral surface are the largest. The patella is smooth apart from a small tubercle on the pro-lateral surface. The ventral surfaces of the tibia and tarsus are slightly convex. The tibia is large and rotund and the lateral spines are greatly reduced. There is a row of small tubercles along the retro-ventral margin of which



FIGS. 188–193 *Nuncia* (*Corinuncia*) *variegata delli* n.s.sp.
Fig. 188 Lateral view of body; Fig. 189 Coxal region "Form A" male; Fig. 190 Male genitalia; Fig. 191 Pro-lateral surface of pedipalp "Form A" male; Fig. 192 Pro-lateral surface pedipalp "Form B" male; Fig. 193 Pro-lateral surface female pedipalp.

the two proximally situated tubercles are mounted on a swelling of the retro-margin. The pro-margin is even and provided with a row of granules, terminating with a small tubercle and an unevenly bifid spine. A single row of small granules extends along the median ventral surface. The tarsus is armed with five small spines; two on the pro-ventral surface and three on the retro-ventral surface.

Legs. All segments other than tarsi sparsely granulate. Coxa I with numerous small uniformly sized tubercles on the ventral surface (Fig. 189). Coxa 2 with one large, one medium-sized and numerous small tubercles on the distal portion of the retro-lateral surface. Coxa 3 with a row of granules along both pro-ventral and retro-ventral margins. Coxa 4 with a group of tubercles on the distal portion of the pro-lateral surface, of which the most distal tubercle is the largest. There is an irregularly shaped tubercle on the distal surface of the retro-margin followed by two small granules.

Measurements

		Scute	Length 4.79		Width 3.92			
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	1.21	0.53	1.80	1.01	1.32	1.54	1.32	8.73
Leg 2	1.60	0.62	1.89	1.14	1.98	2.64	3.08	12.95
Leg 3	1.53	0.48	1.58	0.79	1.32	1.80	1.54	9.04
Leg 4	2.34	0.75	2.60	1.32	1.89	2.95	2.16	14.01
Pedipalp		0.88	1.98	0.70	1.94		0.75	6.25
Chelicera	Basal	1.36	Second	1.76				3.12

Male Form B. The scute is of a uniform dark-brown colour, lacking the median band characteristic of Form A. The scute is more strongly granulate with small, inconspicuous tubercles marking the tergal area. The chelicerae are noticeably smaller. Pedipalps less robust, tibia smaller, with small spinous tubercles on both pro- and retro-ventral surfaces (Fig. 192).

Measurements

		Scute	Length 4.35		Width 3.65			
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	1.10	0.44	1.76	0.88	1.45	1.58	0.92	8.13
Leg 2	1.45	0.53	2.29	1.14	2.20	2.51	2.20	12.32
Leg 3	1.41	0.57	1.54	0.79	1.32	1.76	1.63	9.02
Leg 4	2.11	0.79	2.64	1.32	1.80	2.99	1.98	13.63
Pedipalp		0.31	1.58	0.62	1.32		0.88	4.71
Chelicera	Basal	1.19	Second	1.54				2.73

Female. Similar in general structure to Form B Male, but pedipalps smaller (Fig. 193).

Measurements

		Scute	Length 4.35		Width 3.78			
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	1.01	0.53	1.76	0.88	1.28	1.54	1.01	8.01
Leg 2	1.24	0.70	2.33	1.10	1.85	2.24	2.60	12.06
Leg 3	1.35	0.62	1.36	0.88	1.28	1.80	1.36	8.65
Leg 4	1.92	0.66	2.20	1.32	1.76	2.86	1.36	12.08
Pedipalp		0.44	1.19	0.62	1.14		0.70	4.09
Chelicera	Basal	0.88	Second	1.32				2.20

Types. Holotype male (A), Flora Hut, Mount Arthur District, January 28, 1948, R. K. Dell (D.M.2/175); Allotype female, same data (D.M.2/176); Paratypes: same data, 2 ♂ (1 A, 1 B), 4 ♀ (D.M.2/601); same locality, January 27, 1948, R. R. Forster, 3 ♂ (A), 8 ♀ (D.M.2/177); C.M.A. 52, 53); Flora Track, February 12, 1946, E. S. Gourlay, 1 ♂ (B), 1 ♀ (D.M.2/604); Mount Arthur Track, January 22, 1948, R. R. Forster, 1 ♂ (A), (D.M.2/603); Leslie Valley Track, Mount Arthur District, January 24, 1948, R. K. Dell, 1 ♂ (A) (D.M.2/602); Salisbury Hut, Mount Arthur Tableland, February 6, 1946. R. R. Forster, 1 ♂ (B) (D.M.2/605).

Records. Canaan, Nelson, November, 1951, A. C. O'Connor, 4 ♀ (A), 3 ♂ (C.M.A. 616); Canaan, December, 1950, A. C. O'Connor, 1 ♂, 4 immature (C.M.A. 599); Canaan, April 1, 1949, R. A. Cumber, 1 ♀ (C.M.A. 601); South Terrace, Karamea, January 20, 1950, R. R. Forster, 62 ♂ (45 A, 17 B), 56 ♀ (C.M.A. 460); Woodpecker Bay, Westland, January 25, 1950, R. R. Forster, 6 ♀ (5 A, 1 B), 3 ♀ (C.M.A. 464); Bullock Creek, Punakaiki, Westland, January 18, 1950, R. R. Forster, 6 ♀ (4 A, 2 B), 11 ♂ (C.M.A. 461); Seddonville, Westland, February, 1951, A. C. O'Connor, 4 ♂ (2 A, 2 B), 1 ♀ (C.M.A. 625); Hard Creek, Inangahua, December 29, 1951, W. Clqrk, 1 ♀ (C.M.A. 654); Mount Davie, near Greymouth, January 24, 1950, L. P. Hughson, 2 ♂ (1 A, 1 B), 2 ♀ (C.M.A. 463); Marsden Road, Greymouth, November 1, 1950, L. P. Hughson, 7 ♂ (6 A, 1 B) (C.M.A. 626); Taylorville, Greymouth, November 6, 1950, L. P. Hughson, 1 ♀ (C.M.A. 620); Greymouth, April 11, 1950, L. P. Hughson, 1 ♀ (C.M.A. 462); Rahu Saddle, Westland, January 3, 1944, A. W. Parrott, 1 ♀ (C.M.A. 585); Franz Josef, Westland, April 12, 1951, R. R. Forster, 1 ♂ (B) (C.M.A. 619); Lake Paringa, Westland, October 23, 1950, L. P. Hughson, 1 ♂ (A), 4 ♀ (C.M.A. 633); Fox Glacier, September 1, 1951, M. Warren, 2 ♀ (C.M.A. 605); Okarito, December 17, 1949, R. R. Forster, 1 ♂ (A) (C.M.A. 573).

Nuncia variegata australis n.s.sp.

Figs. 194–199

Male

Colour. Scute and free tergites very dark brown, almost black, with a transverse row of orange patches across tergal areas 2–4 and the free tergites. Dorsal surface of chelicera covered with black reticulate markings.

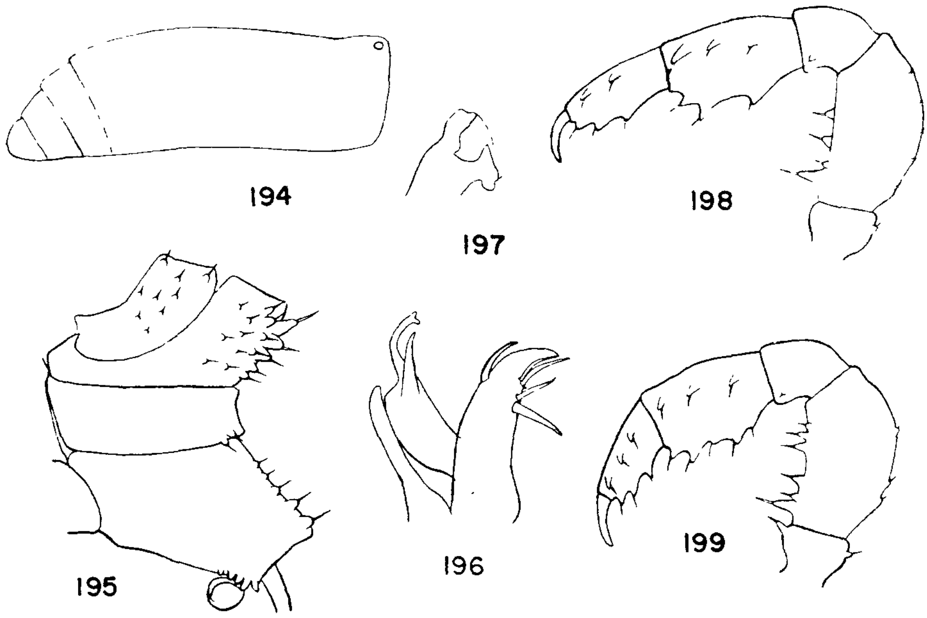
Body. The scute is coriaceous, with a transverse row of low tubercles across areas 2–4, evenly rounded, lacking a scutal groove. The eyemound is low, more than four times as wide at the base than it is high (Fig. 194). The free tergites are finely granulate, sternites smooth and shiny. Maxillary lobes of coxae 2 without a secondary process (Fig. 195).

Genitalia. As shown in Fig. 196. Similar in form to *variegata* but apical portion of the aedeagus evenly curved and terminating bluntly (Fig. 197). The superior seta of the dorsal plates relatively longer, as long as the inferior setae.

Chelicerae. Similar in structure to that of the Type A form of *variegata*.

Pedipalps (Fig. 198). Relatively small. Trochanter with two small tubercles on the dorsal surface and one on the ventral surface. Femur with five minute dentiform tubercles along the dorsal surface, strong conical tubercle on proximo-ventral surface and two smaller tubercles on the mid-ventral surface. Tibia with three small tubercles on both pro- and retro-ventral surfaces. Tarsus with two pro- and three retro-ventral tubercles.

Legs. Coxae with a few tubercles as shown in Fig. 195, larger on the distal retrolateral surface of coxa 2. All segments of legs except tarsi are granulate. Tarsal formula 3.10.4.4.



FIGS. 194–199 *Nuncia* (*Corinuncia*) *variegata australis* n.s.sp.
Fig. 194 Lateral view of body; Fig. 195 Coxal region of male; Fig. 196 Male genitalia;
Fig. 197 Pro-lateral surface male pedipalp; Fig. 198 Pro-lateral surface male pedipalp;
Fig. 198 Pro-lateral surface female pedipalp.

Measurements

		Scute	Length	4.35	Width	3.74		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.36	0.53	1.67	0.92	1.28	1.50	1.36	8.62
Leg 2 ..	1.54	0.66	1.94	1.19	1.80	2.38	2.60	12.11
Leg 3 ..	1.41	0.53	1.45	1.14	1.10	1.14	1.36	8.13
Leg 4 ..	1.80	0.92	2.55	1.19	1.89	3.08	1.63	13.06
Pedipalp ..		0.53	1.28	0.66	1.19		0.92	4.58
Chelicera ..	Basal	1.14	Second	2.16				3.30

Female. Almost identical in structure with the male, but pedipalp with more tubercles on the ventral surface of the femur, and the retro-ventral surface of the tibia as shown in Fig. 194.

Measurements

		Scute	Length	4.57	Width	3.92		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.19	0.57	1.32	0.70	1.33	1.32	1.14	7.57
Leg 2 ..	1.72	0.66	1.85	0.97	1.89	2.02	1.63	10.74
Leg 3 ..	1.45	0.70	1.54	0.62	1.19	1.10	1.19	7.79
Leg 4 ..	1.85	0.75	2.16	1.23	1.63	2.73	1.76	12.11
Pedipalp ..		0.62	1.19	0.62	1.06		0.70	4.19
Chelicera ..	Basal	1.19	Second	1.80				2.99

Types. Holotype male, Snares Island, in forest floor debris, November, 1947, C. A. Fleming (D.M.2/170); Allotype female, same data (D.M.2/171); Paratype: same data, 1 immature (D.M.2/739).

Remarks. The form described above is the only harvestman recorded from the Snares Island and is closely related to the Stewart Island form. It may be distinguished by the low eyemound.

Nuncia smithi Hogg, 1920

1920 *Nuncia smithi* Hogg, Proc. Zool. Soc. London, p.42.
1931 *Nuncia smithi* Hogg,Roewer. Zeits.f.Zool.138(1), p.152
Figs. 200–204

Male Form A

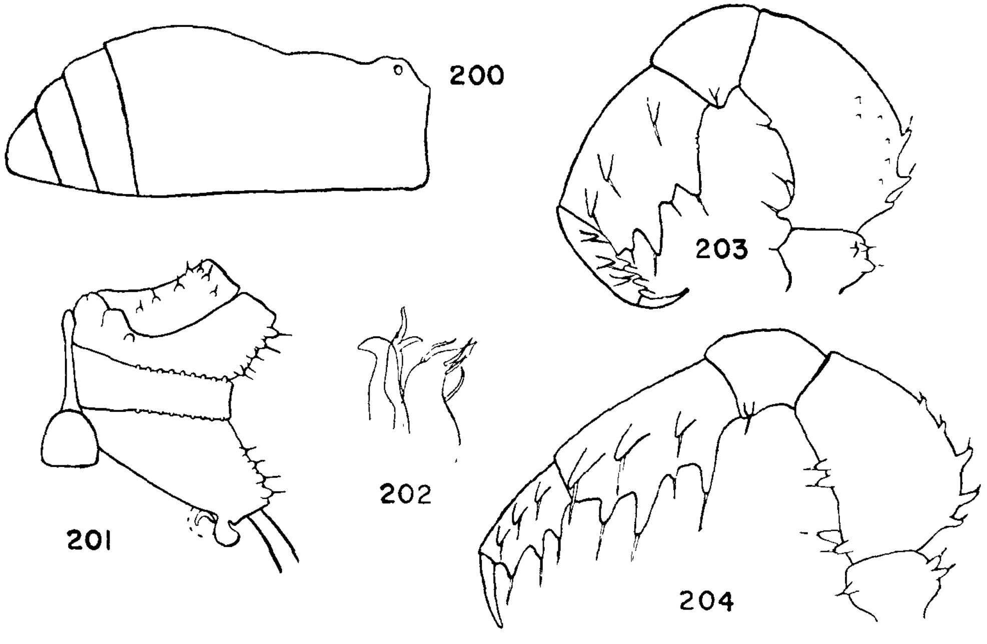
Colour. Ground colour orange-brown with a pattern of darker brown markings.

Body. The scute and free tergites are finely coriaceous, lacking tubercles. The eyemound is low, width at base equal to four times height, flattened apically, with a shallow furrow immediately behind the posterior margin (Fig. 200). Scutal groove shallow, tergal region rounded, rising above the level of the carapace. Maxillary lobes of coxae 2 with a strong rectangular secondary process (Fig. 201).

Genitalia. As shown in Fig. 202. The single superior seta is serrated distally, and equal in length to the three inferior setae. Aedeagus typical.

Chelicerae. Basal segment with a shallow proximo-dorsal groove, beyond which are two sharp tubercles. A further similar tubercle is present on inner disto-dorsal surface. Three to five similar tubercles on dorsal surface of second segment.

Pedipalps (Fig. 203). Two sharp tubercles on dorsal surface of trochanter, three smaller ventral tubercles. Femur with three dentiform tubercles on proximal half of dorsal surface, pair strong spinous tubercles on proximo-ventral surface, small



FIGS. 200–205 *Nuncia* (*Corinuncia*) *smithi* (Hogg)

Fig. 200 Lateral view of body of male; Fig. 201 Coxal region of "Form A" male; Fig. 202 Male genitalia; Fig. 203 Pro-lateral surface pedipalp "Form A" male; Fig. 204 Pro-lateral surface pedipalp "Form B" male.

rounded mid-ventral tubercle. A large proportion of specimens from the middle of the North Island and the Wairarapa have the proximal pro-ventral tubercle reduced in size, while the retro-ventral tubercle is correspondingly enlarged, giving the appearance on superficial examination of a single proximo-ventral tubercle. A few specimens show three equal sized proximo-ventral tubercles. Retro-ventral surface of tibia with four tubercles, of which the second and fourth are small. Pro-ventral surface of tibia and both pro- and retro-ventral surfaces of tarsus with three spinous tubercles.

Legs. Coxae as shown in Fig. 201. There are a number of small rounded tubercles on the ventral surface of coxa 1, retro-lateral surface of coxa 2, and pro-lateral surface of coxa 4. There is a strong lobe on the distal retro-lateral surface of coxa 4. Femora of all legs with small nodules on the ventral surface. Tarsal formula 3.9–11.4.4.

Measurements

Scute Length 3.78 Width 3.48

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.45	0.44	1.36	0.75	1.44	0.97	0.57	6.98
Leg 2 ..	1.67	0.48	1.67	0.97	1.76	1.54	1.36	9.45
Leg 3 ..	1.44	0.44	1.23	0.66	1.14	1.10	0.88	6.89
Leg 4 ..	1.76	0.53	1.80	0.92	1.76	2.42	1.10	10.29
Pedipalp ..		0.44	1.80	0.70	1.28		0.62	4.84
Chelicerae	Basal	1.76	Second	1.58				3.34

Male Type B. Process on maxillary lobes lacking. Coloration as in female. Pedipalps similar in structure to Form A, but less robust. Chelicerae shorter.

Measurements

Scute Length 3.92 Width 3.51

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.79	0.44	1.54	0.88	1.32	1.54	1.32	7.83
Leg 2 ..	1.54	0.48	2.20	1.10	1.80	2.09	2.33	11.54
Leg 3 ..	1.32	0.53	1.32	0.66	1.19	1.41	1.67	8.10
Leg 4 ..	1.89	0.70	2.20	1.10	1.76	2.64	2.20	12.49
Pedipalp ..		0.44	1.45	0.66	1.32		0.79	4.66
Chelicera ..	Basal	1.19	Second	1.85				3.04

Female. Body much darker and more uniformly shaded than "Form A" male. Pedipalps (Fig. 204) and chelicerae smaller. Maxillary lobes without process.

Measurements

Scute Length 3.21 Width 3.04

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.66	0.35	1.15	0.57	0.92	1.14	0.84	5.63
Leg 2 ..	1.15	0.44	1.45	0.66	1.45	1.54	1.54	8.23
Leg 3 ..	0.70	0.44	1.15	0.44	0.97	0.97	0.88	5.55
Leg 4 ..	1.36	0.44	1.58	0.79	1.54	1.76	0.97	8.44
Pedipalps ..		0.48	0.97	0.57	0.88		0.66	3.56
Chelicerae ..	Basal	1.10	Second	1.32				2.42

Types. Lectotype male, Picton, October 10, 1904, C. Chilton (Hogg No. K 14) (C.M.A. 555).

Syntypes. 1 male, same data, 1 male, 1 female, Hawke's Bay, W. W. Smith (British Museum, Natural History).

Records

South Island. Bluemine Island, Queen Charlotte Sounds, November 19, 1948, R. K. Dell, 1 ♂ (A) (C.M.A. 763); Pakaka Valley, Marlborough, January 21, 1947, S. M. Mulholland, 1 ♀ (D.M.2/526); Lake Janet, Mount Grey, July 21, 1949, R. R. Forster, 1 ♂ (A) (C.M.A. 97); Deans' Bush, Christchurch, November 13, 1948, E. W. Dawson, 1 ♂ (A) (C.M.A. 98); East Grey R., January 13, 1921, G. Archey, 1 ♀ (C.M.A. 563); Kakahu, Geraldine, April 30, 1950, R. R. Forster, 1 ♂, 1 ♀ (C.M.A. 561).

North Island. Lyall Bay, Wellington, December 30, 1942, J. T. Salmon, 4 ♂ (A), 2 ♀ (D.M.2/49); Point Howard, Wellington, January 25, 1949, E. W. Dawson, 1 ♂ (A), 1 ♀ (C.M.A. 430); King George V. Park, Wellington, May 21, 1950, R. R. Forster, 1 ♀ (C.M.A. 598); Botanical Gardens, Wellington, November 17, 1920, R. E. R. Grimmett, 3 ♂ (A), 2 ♀ (D.M.2/523); Karori, Wellington, August 2, 1942, R. R. Forster, 1 ♂ (B) (D.M.2/529); Days Bay, Wellington, June 28, 1948, R. R. Forster, 1 ♂ (B) (D.M.2/525); Days Bay, August 7, 1946, R. R. Forster, 1 ♂ (A) (D.M.2/753); Stokes Valley, Wellington, November 30, 1947, R. K. Dell, 1 ♂ (B) (D.M.2/530); Titahi Bay, Wellington, January 24, 1920, R. E. R. Grimmett, 2 ♀ (D.M.2/527); South Karori, Wellington, March 15, 1920, R. E. R. Grimmett, 1 ♀ (D.M.2/541); Karori, April 3, 1948, D. Hurley, 1 ♂ (B) (D.M.2/573); Island Bay, Wellington, November 21, 1920, R. E. R. Grimmett, 3 ♂ (A), 1 ♀ (D.M.2/542); Orongorongo, December 6, 1920, R. E. R. Grimmett, 1 ♀ (D.M.2/628); Kaihinui, Tararua Range, June 19, 1950, R. K. Dell, 5 ♂ (A), 4 ♀ (D.M.2/733); Rimutuka District, August 10, 1942, R. R. Forster, 1 ♂ (A), 2 ♀ (D.M.2/534); West Side, Rimutuka Range, June 13, 1948, R. K. Dell, 1 ♂ (A), 3 ♀ (D.M.2/547); Akatarawa, January 1, 1943, R. R. Forster, 2 ♂ (B), 3 ♀ (D.M.2/761); Akatarawa Divide, January 3, 1947, J. T. Salmon, 1 ♀ (D.M.2/756); Pangaroa, Wairarapa, November 17, 1946, J. H. Sorensen, 1 ♂ (B), 2 ♀ (D.M.2/741); Mount Ross, South Wairarapa, April 5, 1947, R. R. Forster, 1 ♀ (D.M.2/548); Mangarei, Wairarapa, October 20, 1945, C. L. Wilton, 2 ♂ (1 A, 1 B) (D.M.2/520); Opouwa Gulley, South Wairarapa, April 5, 1947, R. R. Forster, 2 ♂ (1 A, 1 B), 1 ♀ (D.M.2/524); Turanganui, Wairarapa, October, 1948, A. C. O'Connor, 3 ♀ (2 A, 1 B), 1 ♂ (C.M.A. 429); near Pirinoa, Wairarapa, May, 1950, A. C. O'Connor, 1 ♀, 4 ♂ (C.M.A. 431); Pahiatua Track, 1,100 feet, August 23, 1951, A. C. O'Connor, 3 ♀ (A), 2 ♂ (C.M.A. 649); Feilding, December 26, 1949, R. R. Forster, 5 ♀ (3 A, 2 B), 6 ♂ (C.M.A. 487); Feilding, October 4, 1942, R. R. Forster, 5 ♂ (3 A, 2 B), 3 ♀ (D.M.2/432); Dannevirke, July 11, 1942, R. R. Forster, 1 ♀ (D.M.2/552); Kereru, Hawke's Bay, December 23, 1945, R. R. Forster, 2 ♂ (1 A, 1 B), 3 ♀ (C.M.A. 438); Te Mata Park, Havelock North, August 24, 1942, R. R. Forster, 12 ♂ (6 A, 6 B), 11 ♀ (C.M.A. 485); Vinegar Hill Reserve, near Taihape, December 12, 1948, R. R. Forster, 1 ♂ (B), 1 ♀ (C.M.A. 434); Taoroa, Rangitikei River, February, 1950, A. C. O'Connor, 4 ♂ (3 A, 1 B), 3 ♀ (C.M.A. 424); Westmere, Wanganui, December 16, 1948, J. M. Moreland, 1 ♂ (B), (C.M.A. 660); Garden Park, Wanganui, December 28, 1948, J. M. Moreland, 1 ♀ (C.M.A. 662); Te Awanga, Hawke's Bay, April 1, 1947, R. R. Forster, 3 ♂ (A), 1 ♀ (C.M.A. 488); Fernhill, Hawke's Bay, March, 15 1943, R. R. Forster, 1 ♀ (C.M.A. 492); Raetihi, December 23, 1948, R. R. Forster, 1 ♂ (A) (C.M.A. 589); Chateau Tongariro, December 20, 1948, R. R. Forster, 3 ♂ (C.M.A. 437); Pirangahea, Manawatu, January 29, 1951, T. E. Woodward, 3 ♀ (B), 2 ♂ (C.M.A. 708); Rotorua, 1926, R. E. R. Grimmett, 1 ♀ (B) (D.M.2/732); Stratford, November 28, 1948, T. E. Woodward, 1 ♀ (C.M.A. 421); Lower slopes, Mount Egmont, January 11, 1950, T. E. Woodward, 1 ♂ (A) (C.M.A. 629); Whaka State Forest, August, 1950, C. Rawlings, 1 ♀ (C.M.A. 646); Otautau, Coromandel, January 11, 1952, T. E. Woodward, 1 ♂ (B) (C.M.A. 665); Te Hope Valley, Coromandel, January 12, 1952, T. E. Woodward, 1 ♂ (A) (C.M.A. 666); Te Araroa, Coromandel Peninsula, December, 1950, R. K. Dell, J. M. Moreland, 1 ♂ (A) (D.M.2/776); Waikaremoana, December 13, 1946, R. R. Forster, 2 ♂ (A), 4 ♀ (D.M.2 536); Mount Ngamoko Track, Waikaremoana, 2,600 feet, December 9, 1946, R. R. Forster, 2 ♂ (A), 4 ♀ (D.M.2/545, 2/546); Waitakere Hills, February 8, 1949, R. R. Forster, 2 ♂ (A), 2 ♀ (C.M.A. 596); Waitakere Hills, Auckland, 1947, D. M. King, 1 ♂ (A) (D.M.2/553); Titirangi, Auckland, December 12, 1945, R. R. Forster, 1 ♂ (A) (D.M.2/537); Titirangi, December 2, 1950, T. E. Woodward, 1 ♂ (A), 2 ♀ (C.M.A. 650); Huia, Auckland, April 13, 1950, T. E. Woodward, 1 ♂ (A) (C.M.A. 604); Western Springs, Auckland, April 8, 1951, T. E. Woodward, 1 ♀ (C.M.A. 657); Paiaka, July, 1949, R. A. Cumber, 1 ♂ (B), 1 ♀ (C.M.A. 428); Paihia, December, 1948, R. A. Cumber, 1 ♀ (B), 1 ♂ (C.M.A. 433); Mount Albert, Auckland, February 3, 1949, R. K. Dell, 1 ♂ (B), 1 ♀ (C.M.A. 436); Rangitoto Island, Auckland, September 3, 1950, I. W. T. Munro, 1 ♀ (C.M.A. 643); Cuvier Island, Hauraki Gulf, July, 1943, R. R. Forster, 2 ♂ (D.M.2/544).

Remarks. This species is one of the most widely distributed of the New Zealand Laniatores, being found throughout the North Island, apart from the far north, and down the East Coast of the South Island into Canterbury.

Nuncia sublaevis (Pocock, 1903)

1903 *Triaenonyx sublaevis* Pocock,Proc.Zool.Soc.London,p.404.
1903 *Nuncia sublaevis* Pocock,Ann.Mag.Nat.Hist.Ser.7(11),p.445.
1910 *Triaenonyx testaceus* Hogg,Trans.N.Z.Inst.42,p.250.
1914 *Nuncia sublaevis* (Pocock),Roewer,Arch.Naturg.80A (12) p.80.
1914 *Metanuncia testacea* (Hogg).Roewer,Arch.Naturg.80A (12), p.101.
1920 *Nuncia sublaevis* (Pocock),Roewer,Die Weberknechte der Erde, p.592.
1923 *Metanuncia testacea* (Hogg),Roewer,Die Weberknechte der Erde, p.603.

Figs. 206–211

Male

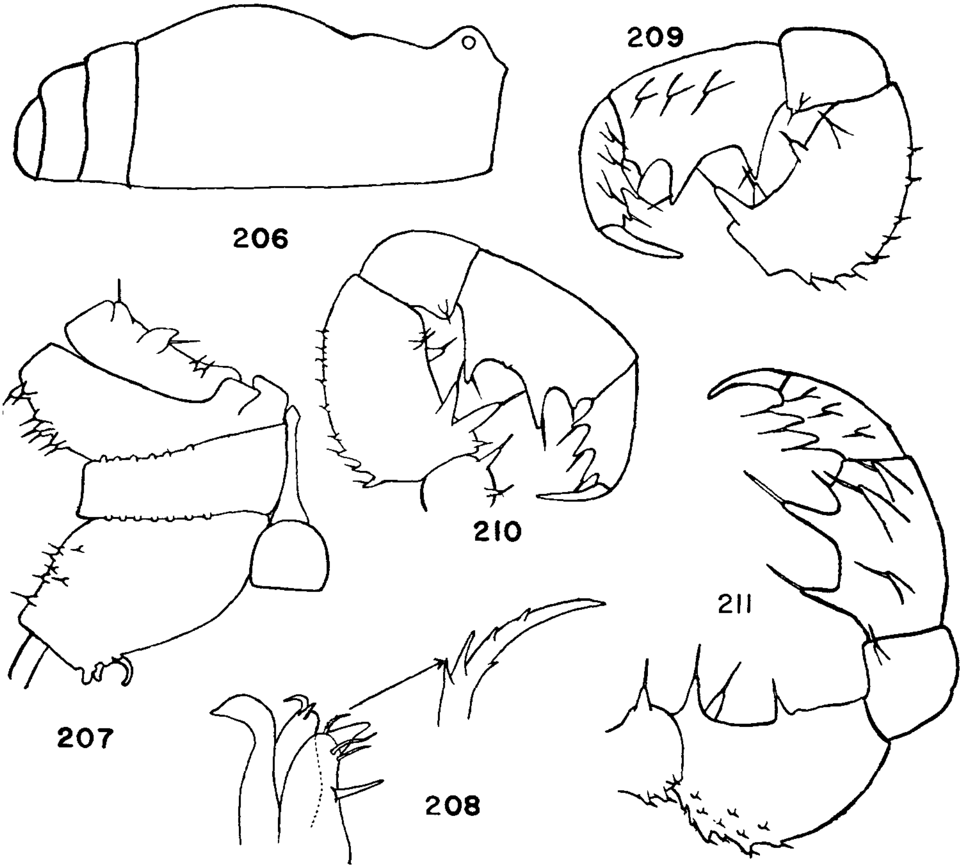
Colour. General colour yellowish-brown with black shading on the free tergites and with black reticulate markings on the dorsal surfaces of the chelicerae and pedipalps.

Body. The general form of the body is as described for *smithi* but the eyemound is more evenly conical and the tergal region of the scute is higher (Fig. 206). The scute is finely granulate but free from tubercles. The free tergites are provided with a transverse row of small tubercles. The maxillary lobes of coxae 2 are provided with a strong sub-rectangular secondary process (Fig. 207).

Genitalia. Typical. The superior seta is relatively long and provided with accessary teeth (Fig. 208).

Chelicerae. Basal segment with a shallow proximo-dorsal groove and a small disto-dorsal tubercle. Second segment with a row of strong setose tubercles along the dorsal surface.

Pedipalps (Figs. 209, 210). Trochanter with three small tubercles, one ventral, two dorsal. There are four dentiform tubercles on the proximo-dorsal surface of the femur, followed by a number of smaller rounded tubercles. Small proximo-ventral tubercle closely followed by a pair of strong spiniform tubercles, and with two smaller conical tubercles at about three-quarters of the length of the segment and with a similar distally situated tubercle on the prolateral surface. Tibia and tarsus with three spinous tubercles on both ventral margins. First two retro-ventral tubercles of the tibia strong and broad.



FIGS. 206–211 *Nuncia* (*Corinuncia*) *sublaevis* (Pocock)
Fig. 206 Lateral view of body; Fig. 207 Coxal region of male; Fig. 208 Male genitalia; Fig. 209 Pro-lateral surface male pedipalp; Fig. 210 Retro-lateral surface male pedipalp; Fig. 211 Pro-lateral surface female pedipalp.

Legs. There are two strong tubercles on the ventral surface of coxa 1 and small tubercles on the retro-lateral surface of coxa 2 and the pro-lateral surface of coxa 4, as shown in Fig. 207. Legs otherwise only sparsely granulate. Tarsal formula 3.8–9.4.4.

Measurements

Scute Length 4.45 Width 3.92

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.28	0.57	2.20	0.97	1.80	2.02	1.50	10.16
Leg 2 ..	2.02	0.75	3.30	1.10	2.64	2.86	2.86	15.53
Leg 3 ..	1.67	0.62	1.98	0.88	1.80	2.42	1.80	11.17
Leg 4 ..	2.02	0.88	3.13	1.10	3.08	3.61	1.98	15.80
Pedipalps		0.84	2.20	0.88	1.76		1.28	6.96
Chelicera ..	Basal	2.29	Second	2.46				4.75

Female. Similar in structure but lacking the secondary process on the maxillary lobes and pedipalp, as shown in Fig. 211.

Measurements

		Scute	Length	4.21	Width	3.78		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.14	0.53	1.98	0.88	1.54	1.89	1.14	9.10
Leg 2 ..	1.94	0.57	2.86	1.10	2.24	2.51	2.77	13.99
Leg 3 ..	1.54	0.53	2.20	0.75	1.58	2.16	1.41	10.17
Leg 4 ..	1.98	0.53	2.64	1.10	2.24	3.30	1.80	13.59
Pedipalp ..		0.57	1.80	0.53	1.32		1.10	5.32
Chelicera ..	Basal	1.41	Second	2.11				3.52

Types. Holotype male, West Taieri Bush, Dunedin, J. V. Jennings (British Museum, Natural History) (not seen).

Records. Dunedin Bush, January 1, 1938, B. J. Marples, 1 ♂ (C.M.A. 76); Opoho Bush, Dunedin, April, 1946, T. Smith, 1 ♀ (D.M.2/196); Taieri Mouth, Dunedin, January 18, 1937, B. J. Marples, 1 ♀ (D.M.2/752).

Remarks. Nuncia sublaevis is readily separated from *smithi* by its larger size, more evenly rounded eyemound and more prominent tubercles on the ventral surface of coxa 1. I have examined the type material of *Triaenonyx testaceus* Hogg, which is held in the Otago Museum, Dunedin. This species is undoubtedly synonymous with *sublaevis.* Roewer (1914) established a new genus *Metanuncia,* for *testacea* Hogg and *stewartia* Hogg, on the assumption that the tarsal count given by Hogg for these species was correct, viz. 4, more than 6,5,5. However, examination of the type material of both of these species shows that Hogg had included in his count the calcaneus of the metatarsus.

Nuncia (Corinuncia) stewartia (Hogg, 1910)

1910 *Triaenonyx stewartius* Hogg.Trans.N.Z.Inst.42, p.281.
1914 *Metanuncia stewartia* (Hogg),Roewer,Arch.Naturg.,80A (12), p.102.
1920 *Triaenonyx stewartius* Hogg.Proc.Zool.Soc.London, p.39.
1923 *Metanuncia stewartia* (Hogg),Roewer,Die Weberknechte der Erde, p.603.

Figs. 212–217

Male (*Form A*)

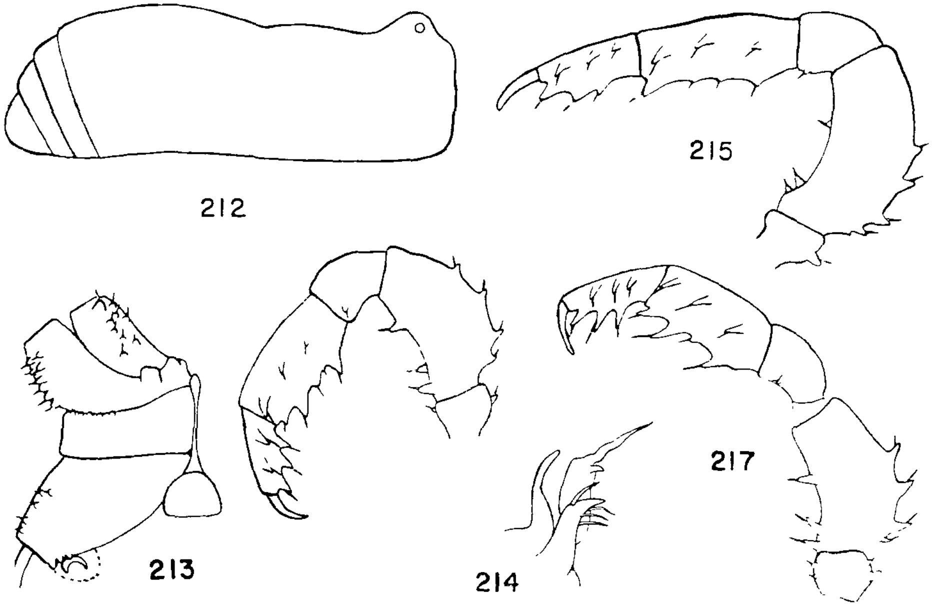
Colour. The ground colour of the scute and free tergites is orange-brown but this is almost entirely overlaid with blackish shading, which forms reticulate markings on the anterior portion of the carapace. Sternites and coxae of legs reddish-brown with few black markings.

Body. Scute and free tergites finely granulate, lacking tubercles. Eyemound evenly rounded, set back slightly from the anterior margin of the carapace, twice as wide as it is high. Scutal groove shallow, tergal region rounded, rising slightly higher than the level of the carapace (Fig. 212). The maxillary lobes of coxae 2 are as shown in Fig. 213; there is a strong, truncated secondary process present.

Genitalia. As shown in Fig. 214. The aedeagus is provided with a short pair of lateral processes, beyond which the apical portion of the aedeagus is directed obliquely forward and is slightly sinuous. The superior and the inferior setae of the ventral plates are subequal in length. The inferior setae are closely spaced on the distal half of the plate.

Chelicerae. These are long and relatively slender with two strong denticulate tubercles on the dorsal surface of the second segment.

Pedipalps (Fig. 215). Trochanter with a small tubercle on both dorsal and ventral surfaces. Femur with four denticulate tubercles along the proximal two-thirds



Figs. 212–217 *Nuncia* (*Corinuncia*) *stewartia* (Hogg)
Fig. 212 Lateral view of body; Fig. 213 Coxal region of "Form A" male; Fig. 214 Male genitalia; Fig. 215 Pro-lateral surface "Form A" male pedipalp; Fig. 216 Pro-lateral surface "Form B" male pedipalp; Fig. 217 Pro-lateral view female pedipalp.

of the dorsal surface, and three strong spiniform tubercles on the ventral surface, two proximal, third median. Retro-ventral surface of tibia with a small spiniform tubercle on the proximal surface, stronger tubercle on distal surface and two small inconspicuous tubercles on the median surface. Pro-ventral surface of tibia, and both pro- and retro-ventral surfaces of tarsus with three spiniform tubercles.

Legs. All segments other than metatarsi and tarsi sparsely granulate. Coxae as shown in Fig. 213. Ventral surface of coxa 1, retro-lateral surface of coxa 2 and pro-lateral surface of coxa 4 with small rounded tubercles. Tarsal formula 4.9–11.4.4.

Measurements

Scute Length 3.30 Width 2.60

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.70	0.35	1.54	0.75	1.14	1.32	0.75	6.55
Leg 2 ..	1.54	0.44	2.07	0.88	1.67	1.89	1.98	10.47
Leg 3 ..	1.14	0.44	1.41	0.66	0.97	1.10	1.10	6.82
Leg 4 ..	1.54	0.53	1.54	0.84	1.41	2.42	1.63	9.91
Pedipalp ..		0.44	1.50	0.62	1.28		0.79	4.63
Chelicera ..	Basal	1.54	Second	1.85				3.39

Male (*Form B*). General structure similar to 'Form A' but differing as follows:— The chelicerae are shorter and relatively stouter. There are four tubercles on the retro-ventral surface of the tibia of the pedipalp but the first and the third are spiniform, second and fourth small (Fig. 211). There is no secondary process on the maxillary lobes of coxa 2. Tarsal formula 4.10–11.4.4.

Measurements

Scute Length 2.90 Width 2.42

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.70	0.40	1.36	0.62	1.10	1.19	0.88	6.25
Leg 2 ..	1.23	0.44	1.76	0.79	1.50	1.58	1.85	9.15
Leg 3 ..	1.06	0.40	1.14	0.62	1.06	1.10	1.01	6.39
Leg 4 ..	1.32	0.57	1.80	0.88	1.45	1.80	1.32	9.14
Pedipalp ..		0.26	1.32	0.53	0.92		0.57	3.60
Chelicera ..	Basal	0.97	Second	1.32				2.29

Female. Similar in form to the 'Form B' male. Disposition of tubercles on the pedipalp similar but tubercles generally relatively stronger (Fig. 217). Tarsal formula 3.9–11.4.4.

Measurements

Scute Length 3.30 Width 2.68

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.88	0.37	1.36	0.66	1.10	1.10	0.92	6.39
Leg 2 ..	1.32	0.44	1.89	0.70	1.58	1.58	1.76	9.27
Leg 3 ..	1.06	0.53	1.76	0.84	1.41	1.98	1.28	8.86
Leg 4 ..	1.45	0.37	1.32	0.62	0.97	1.14	0.92	6.78
Pedipalp ..		0.35	1.10	0.62	0.92		0.79	3.78
Chelicera ..	Basal	0.88	Second	1.23				2.11

Types. Holotype male, Stewart Island: Otago Museum, Dunedin.

Records. Halfmoon Bay, Stewart Island, January 6, 1939, B. J. Marples (D.M.2/716); Halfmoon Bay, Stewart Island, January 6, 1939, B. J. Marples, 2 ♂ (A), 1 ♂ (B), 1 ♀ (D.M.2/199); Halfmoon Bay, Stewart Island, November 22, 1946, R. R. Forster, 16 ♂ (3 A, 13 B), 16 ♀ (D.M.2/713); Halfmoon Bay, Stewart Island, July 6, 1949, O. Allan, 5 ♂ (3 A, 2 B), 3 ♀ (C.M.A. 564); Halfmoon Bay, Stewart Island, June, 1950, O. Allan, 3 ♂ (A), 3 ♀ (C.M.A. 569); Halfmoon Bay, Stewart Island, April 24, 1948, O. Allan, 1 ♂ (B), 1 ♀ (C.M.A. 663); Horseshoe Bay, Stewart Island, January 6, 1939, B. J. Marples, 2 ♂ (B), 3 ♀ (C.M.A. 78); Horseshoe Bay, Stewart Island, November 22, 1946, R. R. Forster, 3 ♂ (B) (C.M.A. 79); Lower Slopes, Mount Kakeahua, Stewart Island, January 30, 1951, E. W. Dawson, 1 ♂ (B) (C.M.A. 565); Maori Bay, Stewart Island, November 25, 1946, R. R. Forster, 6 ♂ (3 A, 3 B), 4 ♀ (D.M.2/713, 2/718); Raroa Reserve, Stewart Island, October 26, 1948, R. K. Dell, 5 ♂ (3 A, 2 B), 2 ♀ (D.M.2/714); Bravo, Stewart Island, November 23, 1946, R. R. Forster, 7 ♂ (7 A), 5 ♀ (D.M.2/715); Sealers Bay, Codfish Island, November 9, 1948, R. K. Dell, 1 ♂ (B), 1 ♀ (D.M.2/736); Orepuki, Southland, August 11, 1949, J. H. Sorensen, 38 ♂ (27 A, 11 B), 37 ♀ (C.M.A. 566); Pahia, Southland, May 20, 1949, J. H. Sorensen, 6 ♂ (3 A, 3 B), 8 ♀ (C.M.A. 567); Bluff, January 27, 1946, R. R. Forster, 5 ♂ (5 A), 3 ♀ (D.M.2/717).

Nuncia (Corinuncia) stewartia tumosa n.s.sp.

Figs. 218–223

Male (Form A)

Colour. Ground colour orange-brown, with black reticulate markings on the anterior portion of the carapace and black shading on the tergal region and the free tergites. Ventral surfaces of coxae of legs and dorsal surfaces of chelicerae and pedipalps covered with black reticulate markings.

Body. The carapace is dull, but not coriaceous, without tubercles. The eyemound is similar to *stewartia* in appearance, twice as wide at the base as it is high. The scutal groove is distinct; tergal region rounded, as high as the carapace (Fig. 218). Maxillary lobes as in *stewartia* but secondary process stronger (Fig. 219). The genital operculum is narrow, sub-triangular in shape.

Genitalia (Fig. 220). Differing from *stewartia* as follows:—The apical portion of the aedeagus is not sinuous but is curved distally. The ventral plates are more slender, inferior setae not grouped together but one sub-proximal and two sub-distal.

Chelicerae. Similar in structure to *stewartia*.

Pedipalps (Figs. 221, 222). Differing from *stewartia* as follows:—Three dentiform tubercles on the dorsal surface of the femur; second ventral tubercle strongly developed. The spinous tubercles on the ventral margins of tibia and tarsus stronger: a small tubercle present on the proximal retro-ventral surface of the tibia and three on the median surface.

Legs. Similar in structure to *stewartia*. Tarsal formula 4.11–13.4.4.

Measurements

Scute Length 2.73 Width 2.55

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.75	0.31	1.19	0.57	1.01	1.23	0.88	5.94
Leg 2 ..	1.14	0.40	1.72	0.79	1.45	1.58	1.80	8.88
Leg 3 ..	0.97	0.35	1.28	0.48	0.88	1.10	1.06	6.12
Leg 4 ..	1.28	0.40	1.54	0.70	1.32	1.80	1.19	8.23
Pedipalp ..		0.31	1.28	0.57	0.97		0.70	3.83
Chelicera ..	Basal	1.23	Second	1.41				2.64

Male (*Form B*). Differs from Form A in the absence of the process from the maxillary lobes of coxae 2. The scute is more uniformly shaded approaching that of the female. Pedipalps similar to female but tubercles not quite so slender. Tarsal formula 4.9–13.4.4.

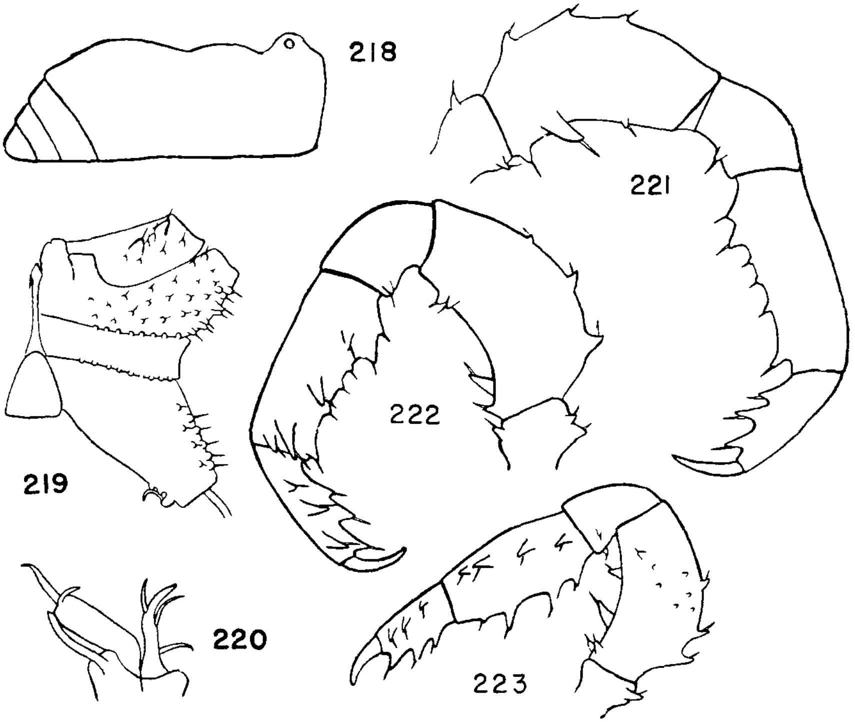
Measurements Scute Length 3.52 Width 3.08

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.14	0.39	1.67	0.88	1.58	1.76	1.14	8.56
Leg 2 ..	1.67	0.53	2.64	0.89	2.20	2.73	2.42	13.08
Leg 3 ..	1.32	0.44	1.63	0.75	1.50	1.85	1.63	9.12
Leg 4 ..	1.94	0.66	2.42	1.10	2.20	3.08	2.20	13.60
Pedipalp ..		0.44	1.58	0.66	1.36		0.70	4.74
Chelicera ..	Basal	1.32	Second	1.72				3.04

Female. General structure similar to *stewartia*. There are three denticulate tubercles along the dorsal surface of the tibia of the pedipalp, two small proximo-ventral tubercles followed by a strong spinous tubercle at one-third and at two-thirds. There are four spinous tubercles along the pro-ventral surface of the tibia (Fig. 223). Remaining structure of the pedipalp as described for *stewartia*.

Measurements Scute Length 2.90 Width 2.46

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.66	0.26	1.32	0.48	0.88	1.10	0.79	5.49
Leg 2 ..	1.19	0.35	1.67	0.66	1.36	1.36	1.50	8.09
Leg 3 ..	0.88	0.31	1.01	0.48	0.88	0.97	0.92	5.45
Leg 4 ..	1.14	0.35	1.50	0.70	1.28	1.76	1.19	7.92
Pedipalp ..		0.35	0.97	0.48	0.97		0.70	3.47
Chelicera ..	Basal	0.97	Second	1.36				2.33



FIGS. 218–223 *Nuncia* (*Corinuncia*) *stewartia tumosa* n.s.sp.
Fig. 218 Lateral view of body; Fig. 219 Coxal region of "Form A" male; Fig. 220 Male genitalia; Fig. 221 Retro-lateral surface "Form A" male pedipalp; Fig. 222 Pro-lateral surface "Form A" male pedipalp; Fig. 223 Pro-lateral surface female pedipalp.

Types. Holotype male (A), Lake Manapouri, January 15, 1951, R. R. Forster C.M.A. 93); Allotype female, same data (C.M.A. 94); Paratypes: 3 ♂ (A), 6 ♀, same data (C.M.A. 95); 1 ♂ (A), 1 ♀ (D.M.2/205).

Records. Takahe Valley, Te Anau, January 11, 1949, J. H. Sorensen, 1 ♀ (A), 1 ♀ (C.M.A. 584); Eglinton Valley, February 4, 1946, R. R. Forster, 6 ♂ (5 A, 1 B), 6 ♀ (D.M.2/719); Key Summit, December 22, 1944, J. T. Salmon, 1 ♀ (D.M.2/725); Cascade Creek, Lower Hollyford Valley, February 2, 1946, R. R. Forster, 1 ♀ (A) (D.M.2/724); Homer, January, 1946, J. T. Salmon, 1 ♂, 2 immature (D.M.2/727); Cleddau Valley, January 22, 1946, R. R. Forster, 1 ♀ (B) (D.M.2/726); Milford Sound, January 20, 1946, R. R. Forster, 1 ♂ (D.M. 2/758); Milford Sound, April 22, 1949, R. R. Forster, 2 ♀ (A) (C.M.A. 592); Anita Bay, Milford Sound, January 29, 1946, R. R. Forster, 7 ♂ (5 A, 2 B), 9 ♀ (D.M.2/722); Caswell Sound, March 22, 1949, R. K. Dell, 1 ♀, 1 immature (D.M.2/728); Caswell Sound, April 19, 1949, R. R. Forster, 6 ♂ (5 A, 1 B), 5 ♀ (C.M.A. 579); Stillwater Base Camp, Caswell Sound, April 19, 1949, R. R. Forster, 2 ♂ (A), 2 ♀ (C.M.A. 580); Upper Stillwater Caswell Sound, April 11, 1949, R. R. Forster, 4 ♂ (3 A ,1 B) (C.M.A. 581); Leslie Clearing, Caswell Sound, March 15, 1949, R. K. Dell, 7 ♂ (5 A, 2 B) (D.M.2/720); Lake Paringa, Westland, October 30, 1950, L. P. Hughson, 1 ♀ (C.M.A. 574); Okarito, December 17, 1949, R. R. Forster, 1 ♂ (A), 1 ♀ (C.M.A. 572); Marsden Road, Greymouth, November 11, 1950, L. P. Hughson, 3 ♂ (2 A, 1 B), 1 ♀ (C.M.A. 627); Mount Davie, near Greymouth, April 6, 1950, L. P. Hughson, 1 ♂ (A) (C.M.A. 578); Moana, March 10, 1950, R. R. Forster, 1 ♂ (A) (C.M.A. 534); Otira, March, 1945, T. P. Harris, 1 ♂ (A) (C.M.A. 577); Bullock Creek, Punakaiki, January 18, 1950, R. R. Forster, 3 ♂ (2 A, 1 B); Seddonville, February, 1951, A. C. O'Connor, 1 ♂ (A) (C.M.A. 623); Lake Taylor, Canterbury, April 14, 1952, R. R. Forster, 1 ♂ (A) (C.M.A. 570); Kiwi Valley, Lewis Pass, November 19, 1949, R. R. Forster, 1 ♂ (A), 1 ♀ (C.M.A. 571).

Remarks. This form is clearly separated from *stewartia* by the structure of the male pedipalp and genitalia, both of which show only insignificant variation among the large series examined. It would appear that *stewartia* has differentiated from *tumosa* while isolated from the mainland, but a relatively recent connection has permitted *stewartia* to obtain a foothold on the south coast of the South Island.

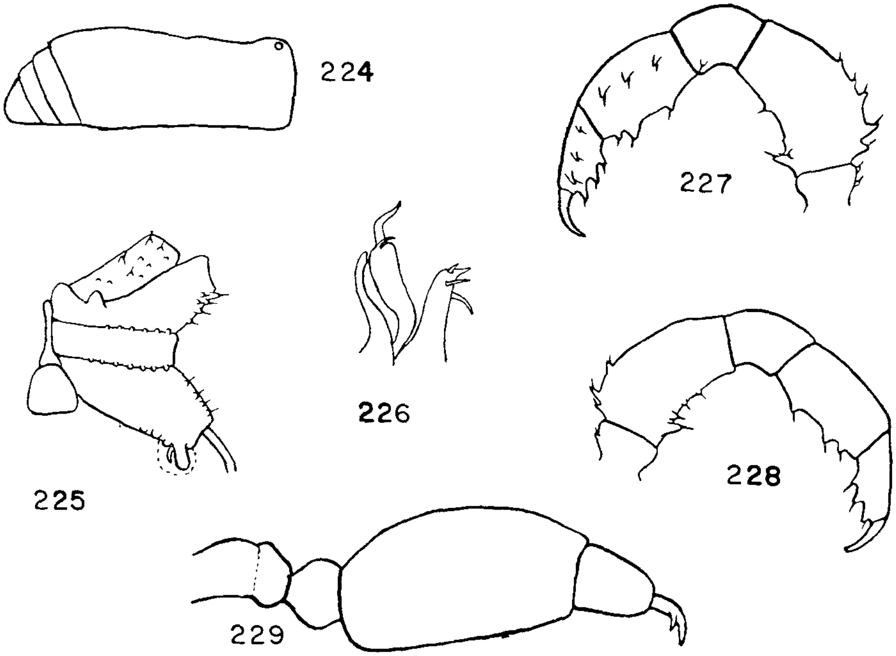
Nuncia (Corinuncia) tumidarta n.sp.

Figs. 224–229

Male

Colour. Ground colour reddish-brown, with black shading on the anterior portion of the carapace, and on the lateral surfaces of the tergal region. Chelicerae and pedipalps with black reticulate markings on the dorsal surfaces.

Body. The scute is finely coriaceous. Eyemound low, width at base equal to three times the height, and somewhat flattened apically (Fig. 224). The scutal groove is



Figs. 224–229 *Nuncia* (*Corinuncia*) *tumidarta* n.sp.

Fig. 224 Lateral view of body; Fig. 225 Coxal region male; Fig. 226 Male genitalia; Fig. 227 Pro-lateral surface male pedipalp; Fig. 228 Retro-lateral view of male pedipalp; Fig. 229 Tarsus of leg 1.

shallow, tergal region rising slightly higher than carapace (Fig. 224). Free tergites each with a row of low tubercles. Maxillary lobes of coxae 2 with a strong, conical secondary process (Fig. 225).

Genitalia. As shown in Fig. 226. The lateral branches of the aedeagus are slender, apical portion beyond the processes bent at about mid-way. The superior seta of the ventral plates is short, only half as long as the two inferior setae, which are situated sub-apically.

Chelicerae. Basal segment with a deep proximo-dorsal furrow and a sharp tubercle on the inner disto-dorsal surface. Second segment smooth.

Pedipalps (Figs. 227, 228). There are five dentiform tubercles on the proximal half of the dorsal surface of the femur, a strong conical tubercle on the proximo-ventral surface and a number of small rounded tubercles on the proximal half of the ventral surface. Tibia and tarsus with three tubercles on both pro- and retro-ventral surfaces.

Legs. There are small rounded tubercles on the ventral surface of the femora of all legs. Coxae provided with small tubercles as shown in Fig. 225. There is a large lobe present on the distal retro-lateral surface of coxa 4 which projects over the spiracle. Tarsal formula—3.6.4.4. The median segment of tarsus 1 is extremely large, almost three times the length of the distal segment and twice as deep (Fig. 229).

Measurements

		Scute	Length	2.99	Width	2.68		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.66	0.26	1.10	0.53	0.70	0.44	1.06	4.75
Leg 2 ..	1.19	0.35	1.36	0.75	1.19	1.32	1.32	7.48
Leg 3 ..	1.01	0.35	0.88	0.48	0.70	0.75	0.70	4.87
Leg 4 ..	1.32	0.40	1.32	0.66	1.06	1.36	0.92	7.04
Pedipalp ..		0.31	1.10	0.48	0.92		0.62	3.43
Chelicera ..	Basal	1.06	Second	1.36				2.42

Types. Holotype male, Horseshoe Bay, Stewart Island, November 11, 1946, R. R. Forster (D.M.2/206).

Remarks. The unusual structure of tarsus 1 and the reduction of the segments to three, readily distinguishes this species from *stewartia.*

Nuncia (Corinuncia) planocula n.sp.

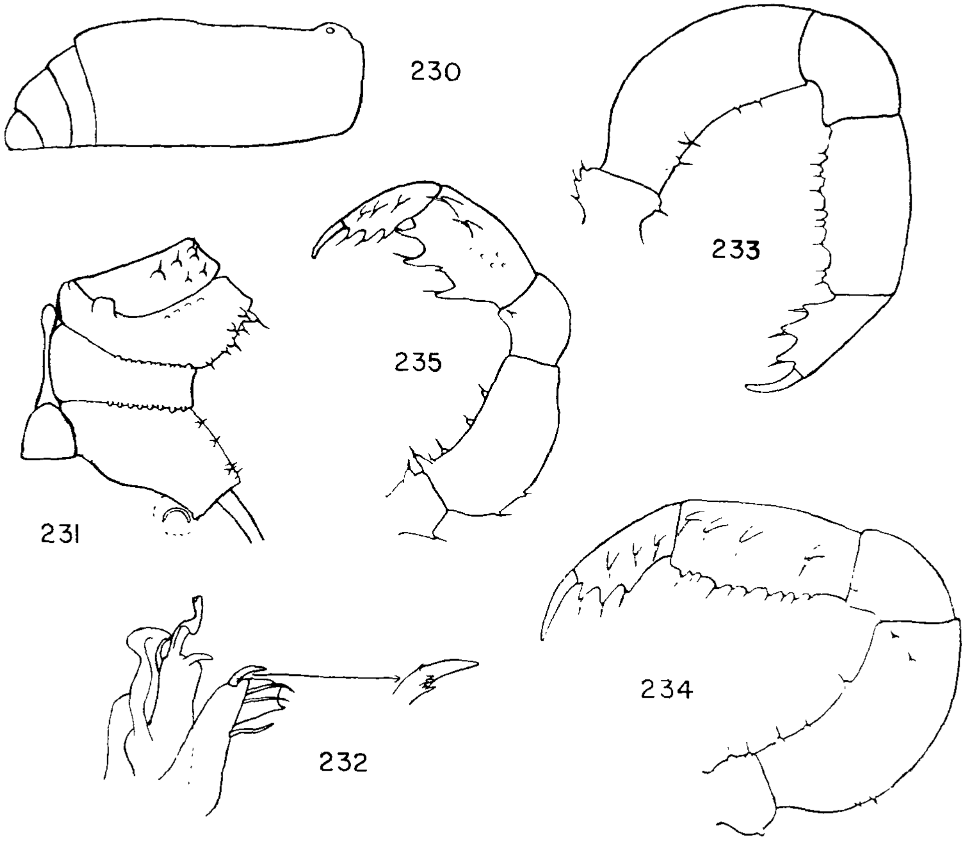
Figs. 230–235

Male

Colour. General colour of scute and free tergites pale-brown. Two indistinct black lines extend from behind the eyemound to the scutal groove, a similar black line runs in from the lateral margins of the scutal groove to meet on the median surface of the tergal region where a single median band extends back to the posterior margin of the scute. Sternites and coxae orange-brown. Dorsal surfaces of chelicerae and pedipalps with black reticulate markings.

Body. Scute and free tergites finely granulate. Eyemound low, three times as wide as high (Fig. 230). Scutal groove lacking, but tergal region slightly higher than carapace. Sternites smooth. Maxillary lobes of coxae 2 as shown in Fig. 231 broad, shiny, secondary process present.

Genitalia. The aedeagus appears to conform with the typical structure of the subgenus, but the apical portion is excavated below and somewhat twisted (Fig. 232).



FIGS. 230–235 *Nuncia* (*Corinuncia*) *planocula* n.sp.
Fig. 230 Lateral view of body; Fig. 231 Coxal region of male; Fig. 232 Male genitalia; Fig. 233 Retro-lateral surface male pedipalp; Fig. 234 Pro-lateral surface male pedipalp; Fig. 235 Pro-lateral surface female pedipalp.

S 1 is stout, with small basal accessary teeth. The inferior setae are sub-equal, longer than S 1 but more slender.

Chelicerae. Both segments relatively long and slender. Basal segment with a prominent proximo-dorsal groove, immediately followed by three sharp tubercles and with a further tubercle on the inner disto-dorsal surface. Second segment with a row of sharp tubercles along the dorsal surface.

Pedipalps. As shown in Figs. 233, 234. There are a few small tubercles on both dorsal and ventral surfaces of the patella. The dorsal surface of the femur is smooth apart from a pair of small tubercles at about one-third. Four similar tubercles are present on ventral surface, two sub-proximal, two sub-distal, and two on distal pro-lateral surface. Tibia with four strong spinous tubercles on pro-ventral surface and numerous small tubercles on retro-ventral surface. Tarsus with three spinous tubercles on both pro- and retro-ventral surfaces.

Legs. Coxae as in Fig. 231. There are a few small rounded tubercles on the ventral surface of coxa 1, retro-lateral surface of coxa 2, and pro-lateral surface of coxa 4. Tarsal formula 4.8–9.4.4.

Measurements

		Scute	Length	3.65	2.99			
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	1.06	0.40	1.41	0.66	1.36	1.36	1.14	7.39
Leg 2	1.54	0.44	2.29	0.88	1.80	1.80	2.20	10.95
Leg 3	1.28	0.44	1.54	0.66	1.10	1.36	1.23	7.61
Leg 4	1.50	0.48	1.94	0.92	1.80	2.38	1.67	10.69
Pedipalp		0.62	2.07	0.70	1.45		0.84	5.68
Chelicera	Basal	1.36	Second	1.98				3.34

Female. Similar to male in general structure. The secondary processes of the maxillary lobes are absent. There is a strong spinous tubercle on the proximo-ventral surface of the femur of the pedipalp, and three smaller tubercles along the retro-ventral surface (Fig. 235). There are three strong spinous tubercles on the retro-ventral surface of the tibia and two similar tubercles on the distal pro-ventral surface. Tarsal formula 3.8–9.4.4.

Measurements

		Scute	Length	3.08	Width	2.68		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	1.01	0.40	1.54	0.48	1.06	1.10	0.88	6.47
Leg 2	1.32	0.48	2.02	0.70	1.72	1.36	1.98	9.58
Leg 3	1.18	0.35	1.36	0.44	1.06	1.28	1.32	6.99
Leg 4	1.42	0.48	1.89	0.79	1.54	2.07	1.32	9.51
Pedipalp		0.40	1.45	0.53	1.01		0.57	3.96
Chelicera	Basal	1.10	Second	1.36				2.46

Types. Holotype male, Dannevirke, July 11, 1942, R. R. Forster (D.M.2/181); Allotype female, same data (D.M.2/182); Paratypes Apiti, October 2, 1949, M. R. Foord, 1 ♂ (C.M.A. 600); Feilding, October 6, 1942, R. R. Forster, 2 ♂ (C.M.A. 58); Kaihinu, Tararua Range, 1,500 feet, June 19, 1950, R. K. Dell, 1 ♂ (D.M.2/184); Botanical Gardens, Wellington, R. E. R. Grimmett, 1 ♂ (C.M.A. 57); Karori Hills April 26, 1946, R. R. Forster, 1 ♀ (D.M.2/183); Karori, June 16, 1942, R. R. Forster, 3 ♀ (C.M.A. 59; D.M.2/185).

Remarks. I consider this species to be most closely related to *stewartia* but sufficiently distinct to warrant full specific status.

Nuncia (Corinuncia) frustrata n.sp.

Figs. 236–241

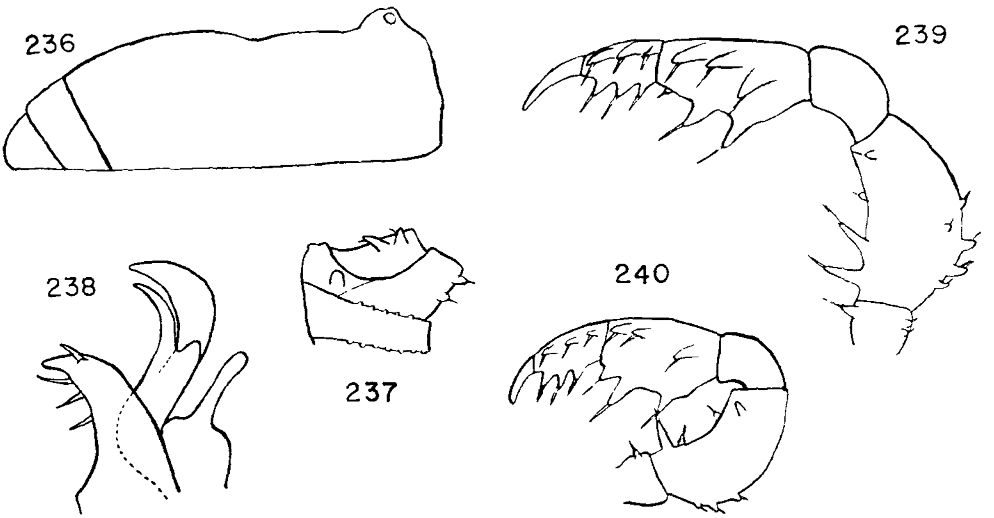
Male

Colour. Orange-brown with black reticulate markings on the anterior portion of the carapace and black shading on the tergal region and free tergites. Dorsal surfaces of chelicerae and pedipalps with black reticulate markings.

Body. Eyemound low, width equal to four times its greatest height, separated from the anterior margin of the carapace by a distance equal to half of the width (Fig. 236). Carapace and free tergites finely granulate, lacking tubercles. Scutal groove shallow. Maxillary lobes of coxae 2 with a small secondary process (Fig. 237).

Genitalia (Fig. 238). Aedeagus short, massive, enclosed proximally by a sheath which extends along the ventral surface to form the lateral processes. Superior seta slightly smaller than the three inferior setae.

Chelicerae. Stout. Basal segment smooth apart from two small disto-dorsal tubercles. Second segment with four tubercles on the dorsal surface of which the third is



FIGS. 236–240 *Nuncia* (*Corinuncia*) *frustrata* n.sp.
Fig. 236 Lateral view of body; Fig. 237 Coxae 1–3 of male; Fig. 238 Male genitalia; Fig. 239 Pro-lateral surface male pedipalp; Fig. 240 Pro-lateral surface female pedipalp.

strongly spiniform, and a spinous tubercle on the distal retro-lateral surface at the base of the movable finger.

Pedipalps (Fig. 239). Trochanter with two small dorsal tubercles and a larger ventral tubercle. Femur with three dentiform tubercles on the proximal half of the dorsal surface and a smaller, more rounded tubercle, on the mid-dorsal surface. There are two strong, somewhat elongate tubercles on the proximo-ventral surface disposed longitudinally and a smaller tubercle on the mid-ventral and distal pro-lateral surfaces. Tibia and tarsus with three tubercles on both pro- and retro-ventral margins, third retro-ventral small, both remaining tubercles strong and spiniform.

Legs. Two spiniform tubercles on the ventral surface of coxa 1 and two more rounded tubercles on retro-lateral surface of coxa 2 (Fig. 237). Femora of legs 1-3 with low tubercles, legs otherwise smooth. Tarsal formula 4.8.4.4.

Measurements

Scute Length 3.25 Width 2.88

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.68	0.38	1.50	0.68	1.05	1.03	1.04	6.36
Leg 2 ..	1.20	0.40	1.90	0.95	1.58	1.83	1.75	9.61
Leg 3 ..	1.15	0.40	1.50	0.50	1.00	1.45	1.25	7.25
Leg 4 ..	1.38	0.43	2.20	0.90	1.75	2.13	1.25	10.04
Pedipalp ..		0.43	1.88	0.75	1.25		0.88	5.19
Chelicera ..	Basal	1.35	Second	1.75				3.10

Female. Similar to male in general structure and appearance. The maxillary lobes are smooth. The tubercle near the base of the movable finger of the chelicera is greatly reduced in size. The pedipalps are relatively more slender and smaller but the number and disposition of tubercles are similar to male, as shown in Fig. 240. Tarsal formula 3.7–8.4.4.

Measurements

Scute Length 2.50 Width 2.75

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.75	0.38	1.50	0.55	1.03	1.18	0.95	6.34
Leg 2 ..	1.28	0.40	1.88	0.38	1.53	1.65	1.70	9.82
Leg 3 ..	1.05	0.68	1.25	0.38	1.00	1.15	1.15	6.66
Leg 4 ..	1.38	0.50	1.75	0.88	1.40	2.15	1.40	9.46
Pedipalp ..		0.40	1.50	0.58	1.13		0.70	4.31
Chelicera ..	Basal	0.98	Second	1.25				2.23

Types. Holotype male, Tapanui, Otago, January 25, 1951, R. R. Forster (C.M.A. 923); Allotype female, same data (C.M.A. 924); Paratypes: same data, 3 ♀, 2 ♂ (C.M.A. 925; D.M.2/924).

Records. Taieri, Dunedin, January 25, 1951, R. R. Forster, 1 ♀ (C.M.A. 929).

Remarks. This distinctive species shows some relationship to *stewartia* in the structure of the pedipalp and in the shape of the scute and eyemound.

Nuncia (Corinuncia) nigriflava Roewer 1923

1902 *Adaeum nigriflavum* Loman (part) Zool.Jahrb.Syst.16, p.211.
1923 *Nuncia nigriflava* (Loman), Roewer, Die Weberknechte der Erde, p.592.

Figs. 241–244

Male

Colour. Ground colour of scute dark orange-brown. An irregular black line extends in from the anterior corners of the tergal region of the scute, merges on the mid-line to form a medium black band which then extends back to the second free tergite. Ventral surface of body orange-brown with a few blackish markings. Dorsal surfaces of chelicerae and pedipalps with black reticulate markings.

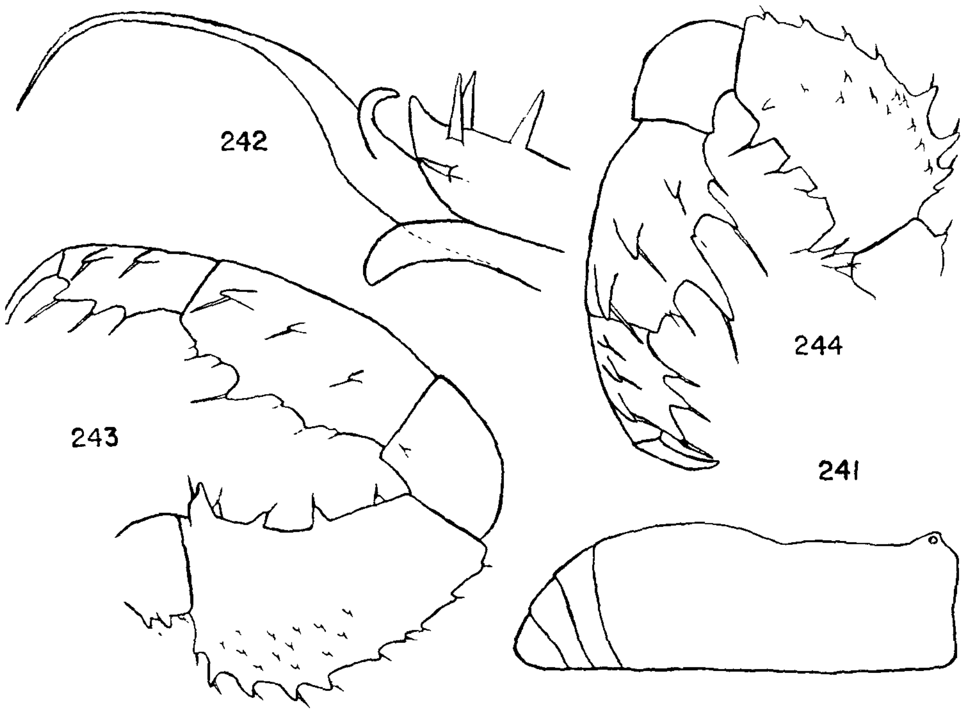
Body. The scute finely granulate, with a few low tubercles on the tergal region. The eyemound is twice as wide as it is high, sloping steeply up from the anterior margin of the carapace and sloping down more gently behind the eyes (Fig. 241). The scutal groove is shallow, tergal region evenly rounded, slightly higher than carapace. Macillary lobes of coxae 2 with a prominent secondary process.

Genitalia (Fig. 242). Aedeagus provided with a typical pair of lateral branches beyond which it narrows to form a long, gently curved and slender process, much longer than proximal portion. Single superior seta, short and stout. Three inferior setae almost twice length of superior, two sub-distal. Third median.

Chelicera. There is a sharp tubercle present on the disto-dorsal surface of basal segment. Second segment with number of small tubercles on the dorsal surface.

Pedipalps (Fig. 238). Three small tubercles on dorsal surface of trochanter. Femur with five strong denticulate tubercles along proximal half of the dorsal surface and five small tubercles on the distal half. Lateral surfaces armed with numerous small tubercles. Two strong tubercles on the proximo-ventral surface are followed by three similarly shaped but smaller tubercles. Tibia with three spinous tubercles on pro-ventral surface and a single, mesial, spinous tubercle on the mid retroventral surface, but with three further low tubercles on both proximal and distal margins. Tarsus armed with spinous tubercles, two pro- and three retro-ventral.

Legs. Ventral surface of coxa 1 with a single sharp tubercle and a number of smaller, more rounded tubercles. Retro-lateral surface of coxa 2 with a pair of prominent tubercles. Coxa 4 with small tubercles on the pro-lateral surface. Few small tubercles also present on the femora, legs otherwise smooth. Tarsal formula 3.7.4.4.



FIGS. 241–244 *Nuncia* (*Corinuncia*) *nigriflava* (Roewer)

Fig. 241 Lateral view of body; Fig. 242 Male genitalia; Fig. 243 Pro-lateral surface of male pedipalp; Fig. 244 Pro-lateral surface of female pedipalp.

Measurements

Scute Length 2.29 Width 2.16

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.62	0.26	1.10	0.53	0.83	0.97	0.53	4.84
Leg 2 ..	0.92	0.31	1.58	0.70	1.32	1.50	1.23	7.56
Leg 3 ..	0.79	0.31	1.10	0.44	0.92	1.14	0.79	5.49
Leg 4 ..	1.06	0.35	1.36	0.66	1.14	1.89	0.84	7.30
Pedipalp ..		0.35	1.10	0.48	0.97		0.57	3.47
Chelicera ..	Basal	0.84	Second	0.97				1.81

Female. Structure similar to males except as follows:—The scute is more coarsely granulate. Free tergites each with a transverse row of low tubercles. Secondary process of the maxillary lobes of coxae 2 reduced to a minute tubercle. Pedipalps as in Fig. 244. There are three definite spinous tubercles on the retro-ventral surface of the tibia, of which the third is small.

Measurements

Scute Length 2.24 Width 2.20

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.53	0.26	0.97	0.48	0.79	0.79	0.66	4.48
Leg 2 ..	0.92	0.31	1.23	0.57	1.01	1.28	0.88	6.20
Leg 3 ..	0.79	0.26	0.84	0.44	0.88	0.79	0.62	4.62
Leg 4 ..	1.10	0.35	1.36	0.57	0.97	1.50	0.88	6.73
Pedipalp ..		0.26	0.88	0.48	0.75		0.48	2.85
Chelicera ..	Basal	0.66	Second	0.92				1.58

Types. Holotype male, Stephen Island (Berlin Museum) (seen).

Records. Mount Arthur Track, 3,600 feet, January 22, 1948, R. R. Forster, 2 ♀, 1 ♂ (D.M.2/342; 2/345); Flora Saddle, 3,200 feet, Mount Arthur District, 17 February, 1946, J. T. Salmon, 2 ♂ (D.M.2/343; C.M.A. 258); Salisbury Clearing, Mount Arhtur Tableland, January 23, 1948, R. R. Forster, 2 ♀, 2 ♂ (D.M.2/346; 2/904); Mount Balloon, Mount Arthur District, January 26, 1948, R. K. Dell, 1 ♀ (D.M. 2/344); Whangamoa, August 30, 1948, A. C. O'Connor, 1 ♀, 1 ♂ (C.M.A. 251); Poormans Valley, Nelson, September 17, 1948, A. W. Parrott, 1 ♀ (C.M.A. 253); Cawthron Park, Nelson, October 17, 1946, E. S. Gourlay, 1 ♀ (D.M.2/349); Karamea Bluff, March 4, 1949, A. C. O'Connor, 1 ♂ (C.M.A. 670); Ships Cove, Queen Charlotte Sounds September 12, 1946, R. J. Smith, 1 ♀ (D.M.2/347); Ships Cove, February 10, 1948, A. J. Healy, 2 ♀ (D.M.2/348).

Remarks. Loman recorded *Adaeum nigriflavum* from Stephen Island, and remarked on the remarkable dimorphism shown between the male and female of his species. Roewer (1923) re-examined Loman's material and redescribed the female which he placed into *Nuncia*, retaining the male specimen in *Adaeum*. Through the courtesy of Dr A. Kaestner of the Berlin Museum, I have been able to examine this material and have found that both of Loman's specimens were in fact males. The specimen retained by Roewer under *Adaeum* is now transferred to *Algidia* and the species placed into *Nuncia* is credited to Roewer.

Nuncia (Corinuncia) nigriflava parva, (Phillipps and Grimmett, 1932)

1932 *Triaenonyx parva* Phillipps and Grimmett, Proc.Zool.Soc.London, p.735.

Figs. 245–250

Male

Colour. Similar to *nigriflava.*

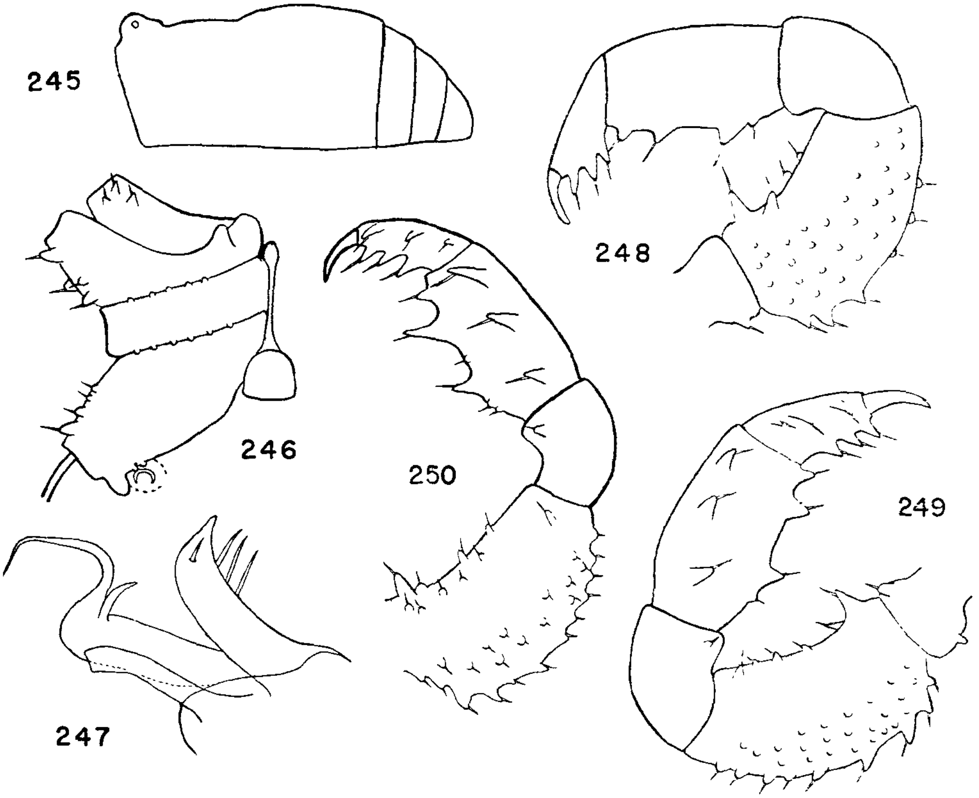
Body. Eyemound similar in shape to *nigriflava*, but more broad, and with narrow ridge around the posterior base (Fig. 245). Cephalothoracic carapace smooth, but tergal region and free tergites with transverse rows of low tubercles. Maxillary lobes of coxae 2 with strong secondary processes (Fig. 246).

Genitalia. As shown in Fig. 247. The aedeagus is similar to that of *nigriflava*, but the portion beyond the lateral branches is curved to form a U. The setae of the ventral plates are of the same relative length as *nigriflava* but are more slender. The three inferior setae are arranged in a row down the ventral surfaces of the plates.

Chelicerae. Small spinous tubercles are present on the disto-dorsal surface of the basal segment. Second segment with a strong denticulate tubercle on the mid-dorsal surface and a smaller but similar tubercle at the base of the movable finger.

Pedipalps (Figs. 248, 249). Similar in structure to *nigriflava* differing mainly in the development of three definite spinous tubercles along the retro-ventral margin of the tibia.

Legs. Small coxae provided with tubercles and granules as shown in Fig. 246. The femora of all legs with small tubercles on the ventral surface. Tarsal formula 3.7.4.4.



FIGS. 245–250 *Nuncia (Corinuncia) nigriflava parva* (Phillipps and Grimmett)
Fig. 245 Lateral view of body; Fig. 246 Coxal region of male; Fig. 247 Male genitalia; Fig. 248 Retro-lateral surface male pedipalp; Fig. 249 Pro-lateral surface male pedipalp; Fig. 250 Pro-lateral surface female pedipalp.

Measurements		Scute	Length 2.24		Width 2.20			
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.70	0.26	1.23	0.53	0.79	0.97	0.62	5.10
Leg 2 ..	1.06	0.31	1.32	0.66	1.14	1.28	1.06	6.83
Leg 3 ..	0.88	0.31	0.88	0.44	0.79	0.97	0.57	4.84
Leg 4 ..	1.23	0.40	1.41	0.57	1.19	1.54	0.79	7.13
Pedipalp ..		0.31	1.14	0.53	0.88		0.62	3.48
Chelicera ..	Basal	0.84	Second	1.10				1.94

Female. Similar to *nigriflava*, differing only in the pedipalps. The spination is similar but the tubercles are relatively weaker (Fig. 250).

Measurements		Scute	Length 2.07		Width 2.20			
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.66	0.22	1.01	0.48	0.70	0.79	0.53	4.19
Leg 2 ..	0.97	0.26	1.23	0.57	0.92	1.10	0.97	6.02
Leg 3 ..	0.88	0.26	0.75	0.35	0.75	0.79	0.57	4.35
Leg 4 ..	1.19	0.31	1.32	0.53	0.97	1.19	0.66	6.17
Pedipalp ..		0.26	0.97	0.44	0.84		0.48	2.99
Chelicera ..	Basal	0.57	Second	0.92				1.49

Types. Lectotype male, Days Bay, Wellington, November 27, 1920, R. E. R. Grimmett (D.M.2/355); syntypes: same data, 3 ♀ (D.M.2/360).

Records. Karori Hills, Wellington, April 21, 1946, R. R. Forster, 1 ♂, 1 ♀ (D.M.2/256); Karori, April 16, 1942, R. R. Forster, 1 ♂, 1 ♀ (D.M.2/256); Karori, April 16, 1942, R. R. Forster, 1 ♂ (D.M.2/356); Karori, April 10, 1948, R. R. Forster, 1 ♀ (D.M.2/361); Johnson's Hill, Karori, April 23, 1946, J. T. Salmon, 1 ♂, 2 ♀ (D.M.2/350); Days Bay, Wellington, June 28, 1942, R. R. Forster, 1 ♂ (D.M.2/364); Days Bay, June 6, 1942, R. R. Forster, 1 ♀ (D.M.2/363); Stokes Valley, Wellington, April 3, 1948, R. R. Forster, 1 ♂, 2 ♀ (D.M.2/354); Stokes Valley, January 10, 1948, A. C. O'Connor, 3 ♀ (C.M.A. 680); Orongorongo, December 6, 1920, R. E. R. Grimmett, 1 ♂, 1 ♀ (D.M.2/358); Wainui-o-mata Valley, April 19, 1948, R. K. Dell, 1 ♂, 3 ♀, 4 immature (D.M.2/366); Kapiti Island, May, 1947, R. R. Forster, 1 ♂, 1 ♀ (C.M.A. 257); Plimmerton, October, 1921, H. Hamilton, 1 ♂, 2 ♀ (D.M.2/351); Rimutaka District, August 10, 1946, A. J. Healy, 1 ♀ (D.M.2/352); Akatarawa Divide, January 3, 1947, J. T. Salmon, 1 ♀ (D.M.2/359); Akatarawa Saddle, April 27, 1943, J. T. Salmon, 1 ♂ (D.M.2/353); Moonshine, Silverstream, April 3, 1948, J. T. Salmon, 1 ♂, 1 ♀ (D.M.2/362); Blue Mountains, Silverstream, April 18, 1948, J. T. Salmon, 1 ♂, 1 ♀ (D.M.2/533); Kitchener Park, Feilding, February 28, 1943, R. R. Forster, 1 ♂ (D.M.2/918); Aorangi, Feilding, December 26, 1949, R. R. Forster, 1 ♂ (C.M.A. 540).

Nuncia (Corinuncia) nigriflava parvocula n.s.sp.

Figs. 251–255

Male

Colour. Ground colour orange-brown, shaded with irregular blackish markings. Dorsal surfaces of chelicerae and pedipalps covered with black reticulate markings.

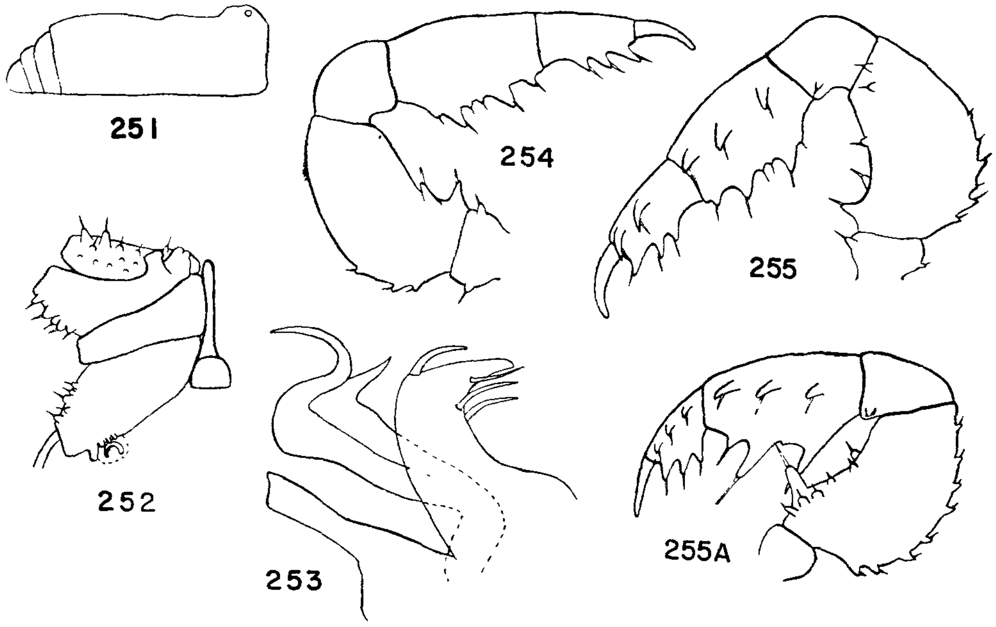
Body. The scute and free tergites are dull in appearance but are not granulate. The eyemound is low, two and a half times as wide as it is high, flattened apically (Fig. 251). Scutal groove shallow, not extending to lateral margins. Tergal region low, not rising above the level of the carapace. Maxillary lobes of coxae 2 with a strong, somewhat truncate, secondary lobe. (Fig. 252).

Genitalia (Fig. 253). The aedeagus is similar in shape to *parva*, but the lateral branches are broader and the apical portion is shorter. The inferior setae of the ventral plates are as in *parva* but the superior seta is much longer, equal in length to the inferior setae.

Chelicerae. Basal segment slender, with two tubercles on the inner disto-dorsal surface. Two prominent tubercles present on the proximal half of the dorsal surface of the second segment and smaller tubercles on the distal half.

Pedipalps (Figs. 254, 255). Femur with five small tubercles on the proximal half of the dorsal surface, two strong spinous proximo-ventral tubercles, small mid-ventral and two small distal pro-lateral tubercles. Tibia and tarsus as in *parva* but with only two spinous tubercles on the pro-ventral surface of tarsus.

Legs. Femora of all legs with few small tubercles on ventral surface, stronger on femora 1 and 4. Coxae as in fig. 252. Small tubercles present on the disto-ventral surface of coxa 1, retro-lateral surface of coxa 2, and the pro-lateral surface of coxa 4. Tarsal formula 3.8.4.4.



FIGS. 251–255 *Nuncia* (*Corinuncia*) *nigriflava parvocula* n.s.sp.
Fig. 251 Lateral view of body; Fig. 252 Coxal region of male; Fig. 253 Male genitalia; Fig. 254 Retro-lateral surface male pedipalp; Fig. 255 Pro-lateral surface male pedipalp; Fig. 255a Pro-lateral surface female pedipalp.

Measurements

Scute Length 2.73 Width 2.55

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.79	0.26	1.36	0.66	0.88	1.10	0.57	5.62
Leg 2 ..	1.23	0.31	1.67	0.75	1.41	1.58	1.32	8.27
Leg 3 ..	0.92	0.27	1.14	0.53	0.88	1.19	0.88	5.51
Leg 4 ..	1.32	0.44	1.63	0.70	1.32	2.07	1.01	8.49
Pedipalp ..		0.35	1.32	0.62	1.28		0.79	4.36
Chelicera ..	Basal	1.32	Second	1.36				2.68

Female. Similar in general appearance to male. The proximo-ventral tubercle of the femur of the pedipalp is relatively longer as are the proximal two tubercles on the retro-ventral surface of the tibia. Maxillary lobes of coxae 2 without secondary processes.

Measurements

Scute Length 2.64 Width 2.38

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.53	0.26	1.06	0.62	0.75	0.88	0.53	4.63
Leg 2 ..	0.92	0.40	1.36	0.57	0.97	1.14	1.01	6.37
Leg 3 ..	0.84	0.31	0.97	0.48	0.84	0.88	0.62	4.94
Leg 4 ..	1.10	0.44	1.63	0.62	0.97	1.32	0.70	6.78
Pedipalp ..		0.31	1.10	0.53	0.88		0.53	2.35
Chelicera ..	Basal	0.57	Second	1.14				1.71

Types. Holotype male, Halfmoon Bay, Stewart Island, June, 1950. O. Allan (C.M.A. 259); Allotype female, same data (C.M.A. 260).

Remarks. The lack of small tubercles on the lateral surfaces of the femur of the pedipalps distinguishes this subspecies from both *parva* and *nigriflava*.

Nuncia (Corinuncia) pallida n.sp.

Figs. 256–260

Male

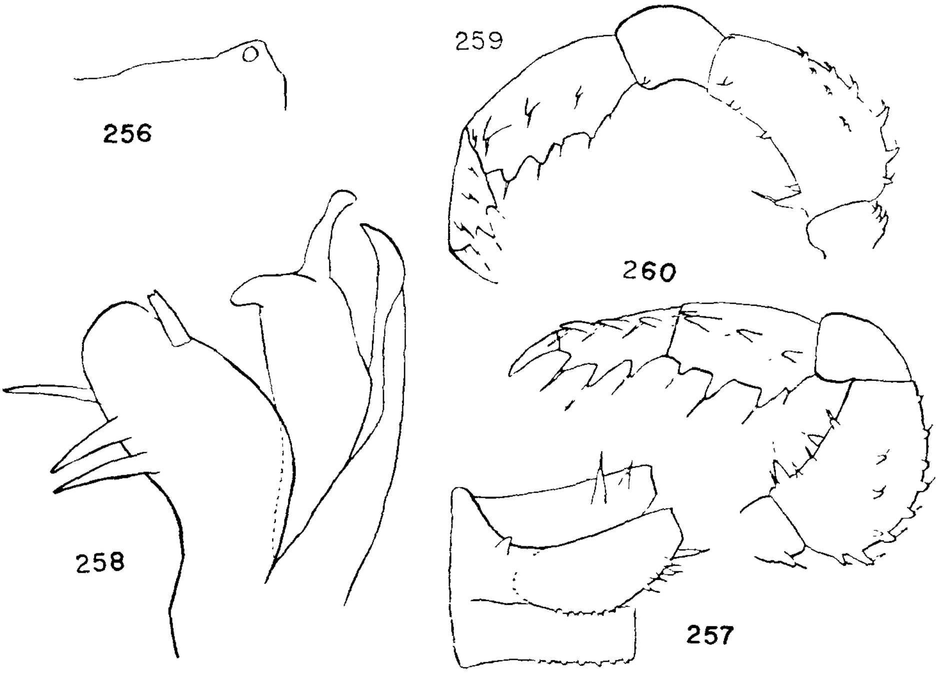
Colour. Uniform pale brown with a darker brown patch on the lateral surfaces of the scute behind the scutal groove.

Body. Eyemound low, sub-conical in lateral view (Fig. 256), distance between eyes equal to that between eyes and anterior margin of the carapace. Scute and free tergites smooth, scutal groove shallow, barely discernable, tergal region low. Maxillary lobes of coxae 2 with a small secondary process (Fig. 257).

Genitalia. As shown in Fig. 258. The aedeagus is of the *Corinuncia* form but the lateral processes are stout and blunt, and the apical portion of the aedeagus is relatively stout. Setae strong, one superior, three inferior.

Chelicerae. Basal segment smooth with a shallow furrow on proximo-dorsal surface of the basal segment. Second segment with a strong dentiform tubercle on the proximo-dorsal surface.

Pedipalps (Fig. 254). Trochanter with two small dorsal tubercles. There is a row of dentiform tubercles along the proximal two-thirds of the dorsal surface of the femur and a strong conical tubercle on the proximo-ventral surface, followed by three small tubercles, one proximal, one median and the third sub-distal in position



FIGS. 256–260 *Nuncia* (*Micronuncia*) *pallida* n.sp.
Fig. 256 Lateral view of carapace and eyemound; Fig. 257 Coxae 1–3 of male; Fig. 258 Male genitalia; Fig. 259 Pro-lateral surface male pedipalp; Fig. 260 Pro-lateral surface female pedipalp.

—ventral surface of tibia with four spiniform tubercles of which the proximal and distal are small. Retro-ventral margin with three somewhat broader tubercles in addition to two smaller tubercles. Tarsus with three spiniform tubercles on both ventral margins.

Legs. Two strong conical tubercles on the distal half of the ventral surface of coxa 1 of which the more proximal is larger (Fig. 257). There is an elongate tubercle on the distal retro-lateral surface of coxa 2 and a sub-distal group of small rounded tubercles. Tarsal formula 3.8.4.4.

Measurements

Scute Length 2.68 Width 2.38

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.79	0.31	1.19	0.57	0.70	0.97	0.70	5.23
Leg 2 ..	1.10	0.26	1.50	0.70	1.32	1.50	1.63	8.01
Leg 3 ..	0.79	0.31	1.10	0.48	0.88	1.14	1.06	5.76
Leg 4 ..	1.14	0.35	1.14	0.79	1.32	1.58	1.19	7.51
Pedipalp ..		0.22	1.32	0.48	1.10		0.57	3.69
Chelicera ..	Basal	1.10	Second	1.36				2.46

Female. Similar in general structure to male. Femur of pedipalp relatively stouter, tubercles of tibia and tarsus more slender (Fig. 260). Maxillary lobes smooth.

Measurements

Scute Length 2.64 Width 2.38

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.70	0.26	1.14	0.57	0.88	0.92	0.66	5.13
Leg 2 ..	1.14	0.31	1.54	0.66	1.19	1.36	1.45	7.65
Leg 3 ..	0.75	0.26	0.88	0.48	0.84	0.92	0.88	5.01
Leg 4 ..	1.14	0.35	1.58	0.70	1.32	1.67	1.14	7.90
Pedipalp ..		0.26	1.28	0.48	0.92		0.57	3.51
Chelicera ..	Basal	1.01	Second	1.21				2.22

Types. Holotype male, Duntroon, Otago, May 18, 1948, B. J. Marples (C.M.A. 269); Allotype female, same data (C.M.A. 270); Paratypes: 3 females, same data (C.M.A. 271, D.M.2/369).

Records. Tapanui, Otago, January 25, 1951, R. R. Forster, 1 ♀ (C.M.A. 315); Hanging Rock, Dunedin, August 22, 1939, B. J. Marples, 1 ♀ (C.M.A. 429); Otekaike, Otago, November 27, 1919, 1 ♂, 1 ♀ (C.M.A. 672).

Nuncia (Corinuncia) elongata n.sp.

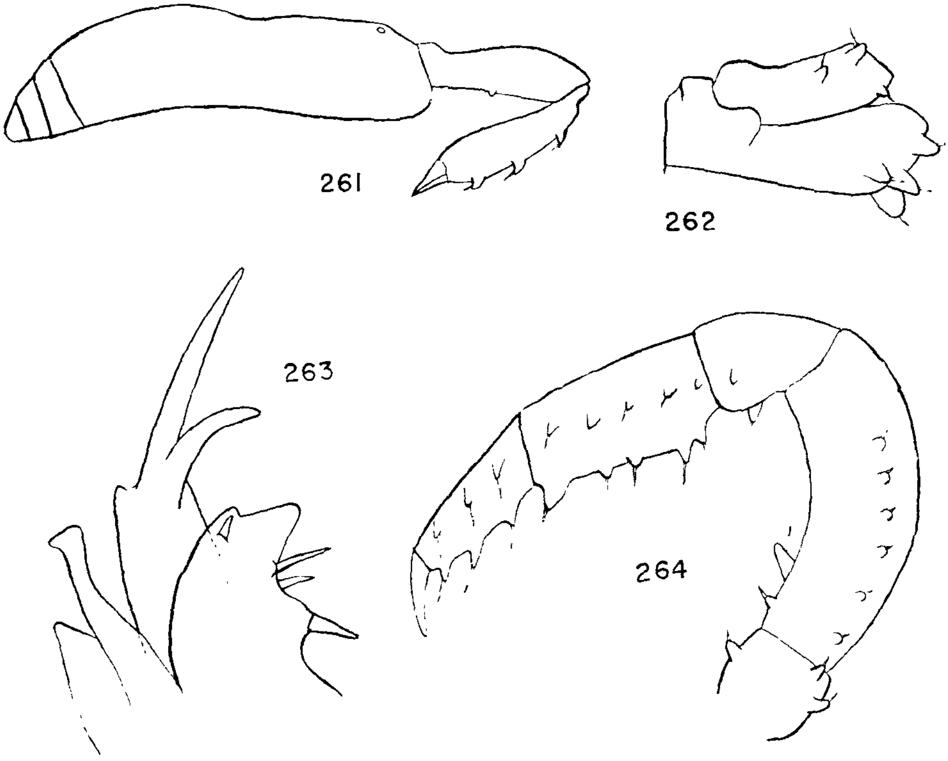
Figs. 261–264

Male

Colour. Entire animal pale orange-yellow.

Body. Scute and free tergites finely and closely granulate. Scute is long, narrow and low. The scutal groove is shallow (Fig. 261). The eyemound is greatly reduced, showing as slight swelling on the scute about the eyes. The eyes are small and without pigment and are separated from the anterior margin of the carapace by a distance which is slightly greater than the distance between the eyes themselves. Maxillary lobes of coxae 2 with a strong secondary process as shown in Fig. 262.

Genitalia. The aedeagus is well developed. The lateral processes are strong, equal to half of the length of the distal portion of the aedeagus. This portion is strong, straight, and terminates sharply (Fig. 263). Superior setae short, thorn-like, inferior setae much longer, proximal seta originates from a small boss.



FIGS. 261-264 *Nuncia* (*Corinuncia*) *elongata* n.sp.
Fig. 261 Lateral view of body and chelicera; Fig. 262 Coxae 1 and 2 of male; Fig. 263 Male genitalia; Fig. 264 Pro-lateral surface male pedipalp.

Chelicerae. Long and slender, equal in length to the scute. Basal segment with a shallow proximo-dorsal furrow and a small rounded tubercle on the mid-ventral surface. Second segment with a row of from 3–4 strong dentiform tubercles on the dorsal surface (Fig. 261).

Pedipalps (Fig. 264). Trochanter with two small tubercles on the dorsal and one on the ventral surface. Femur elongate with a row of small rounded tubercles along the pro-dorsal surface and a small tubercle on the proximo-ventral surface followed closely by a strong sub-conical tubercle. Retro-ventral margin of tibia with five tubercles, two proximal, 2 median and one distal, proximal and distal tubercles conical, median rounded. Pro-ventral margin with row of five small sub-equal rounded tubercles. Tarsus with three conical tubercles on both ventral margins.

Legs. Tubercles on the ventral surface of coxa 1 and the retro-lateral surface of coxa 2 as shown in Fig. 262. There are 4–5 tubercles on the pro-lateral surface of coxa 4. Tarsal formula 3.5.4.4.

Measurements

Scute	Length 2.15	Width 1.58

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.50	0.18	0.78	0.38	0.63	0.55	0.63	3.65
Leg 2 ..	0.75	0.25	1.08	0.55	0.90	1.03	0.98	5.54
Leg 3 ..	0.65	0.25	0.70	0.35	0.48	0.53	0.63	3.59
Leg 4 ..	0.88	0.28	1.15	0.48	0.78	0.98	0.90	5.45
Pedipalps ..		0.28	1.03	0.38	0.63		0.55	2.87
Chelicerae	Basal	1.08	Second	1.13				2.21

Types. Holotype male, Bullock Creek, Punakaiki, Westland, January 20. 1950, R. R. Forster (C.M.A. 926); Paratype male, same data (C.M.A. 927).

Remarks. The elongate body and lack of an eyemound readily distinguishes this species from all other New Zealand Triaenonychids.

Nuncia (Corinuncia) levis n.sp.

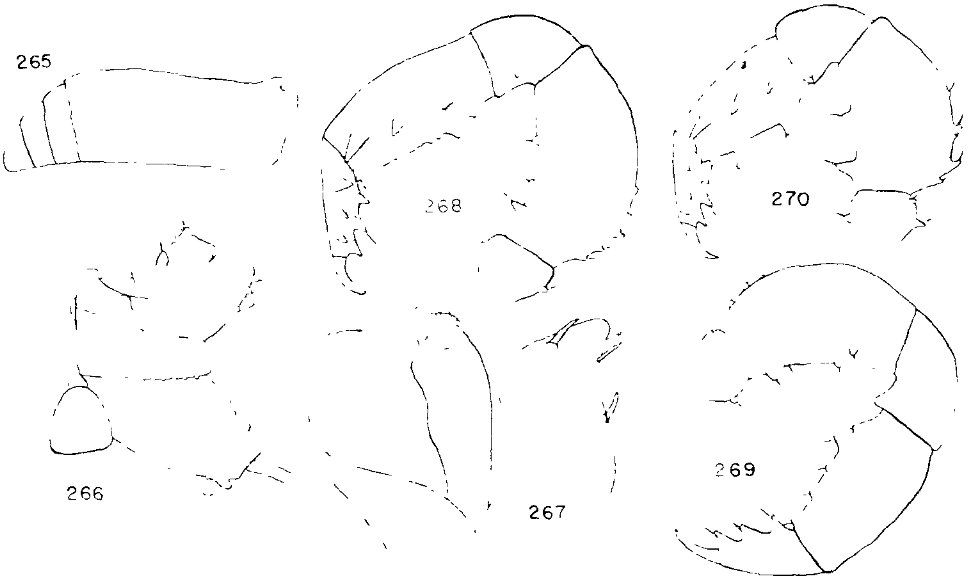
Figs. 265–270

Male

Colour. Scute and free tergites pale yellowish-brown, with faint reticulate markings on the anterior surface of the carapace and a broken median band which extends back to the third free tergite. There is a black patch on the mid-lateral surfaces of the scute. Sternites pale-yellow with a median black band. Dorsal surfaces of pedipalps and chelicerae with faint reticulate markings.

Body. Scute and free tergites finely granulate. Eyemound evenly rounded, low, the width at the base to height is of the ratio 8:3. Scutal groove absent (Fig. 265). Maxillary lobes of coxa 2 with a broad secondary process as shown in Fig. 266.

Genitalia (Fig. 267). The aedeagus is stout but with a slender curved apical portion which has a small accessory tooth on the mid-ventral surface. There is a pair of



FIGS. 265-270 *Nuncia* (*Corinuncia*) *levis* n.sp.
Fig. 265 Lateral view of body; Fig. 266 Coxal region of male; Fig. 267 Male genitalia; Fig. 268 Pro-lateral surface of male pedipalp; Fig 269 Retro-lateral surface male pedipalp; Fig. 270 Pro-lateral surface female pedipalp.

flattened lateral plates, denticulate on the outer surfaces, present at the base of the slender apical portion of the aedeagus. Stout ventral plates, setae peg-like, single superior, and three inferior, of which one is situated on mid-ventral and two on the sub-distal surface.

Chelicerae. Basal segment with a very shallow proximo-dorsal furrow and a single, small tubercle on the disto-dorsal surface. Second segment with two dorsal tubercles, one at one-third, second at two-thirds of its length.

Pedipalps (Figs. 268, 269). Trochanter with one ventral and two dorsal tubercles. Femur with five small dentiform tubercles along the proximal half of the dorsal surface and two pairs of small conical tubercles on the ventral surface, one pair of which are proximal in position, the second pair situated at two-thirds of the length of the segments. Tubercles on the retro-ventral margin of the tibia are relatively small. There are three strong spiniform tubercles on the pro-ventral margin of the tibia and both the pro- and retro-ventral margins of the tarsus. Retro-ventral margin of tibia with one strong conical and three small somewhat rounded tubercles.

Legs. Coxae as shown in Fig. 266. There are two prominent conical tubercles on the ventral surface of coxa 1 in addition to a few smaller tubercles. Retro-lateral surface of coxa 2 and pro-lateral surface of coxa 4 with rounded tubercles. Tarsal formula 3.6.4.4.

Measurements

Scute Length 2.60 Width 2.24

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.75	0.26	0.97	0.44	0.70	0.66	0.70	4.48
Leg 2 .	0.97	0.31	1.23	0.48	1.06	0.84	1.23	6.12
Leg 3 ..	0.88	0.26	0.70	0.44	0.66	0.70	0.75	4.39
Leg 4 ..	1.14	0.35	1.14	0.62	1.06	1.32	1.06	6.69
Pedipalp ..		0.22	1.14	0.44	0.92		0.48	3.20
Chelicera ..	Basal	0.97	Second	1.14				2.11

Female. Similar in structure to male. Maxillary lobes smooth. Pedipalps with three strong spinous tubercles on the retro-ventral margin of tibia as shown in Fig. 270.

Measurements

Scute Length 2.42 Width 2.02

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.53	0.26	0.88	0.44	0.70	0.75	0.44	4.00
Leg 2 .	0.92	0.30	1.28	0.48	1.06	1.06	1.14	6.24
Leg 3 ..	0.84	0.30	0.79	0.35	0.66	0.53	0.70	4.17
Leg 4 ..	1.06	0.34	1.19	0.58	0.92	1.32	0.88	6.29
Pedipalps		0.22	0.92	0.40	0.79		0.44	2.77
Chelicera ..	Basal	0.66	Second	0.92				1.58

Types. Holotype male, Nelson, June 4, 1937, E. S. Gourlay (C.M.A. 284); Allotype female, same data (C.M.A. 285); Paratypes: same data, 3 ♂ (C.M.A. 286); Lower Flora Track, Mount Arthur District, January 20, 1948, R. K. Dell, 1 ♂, 2 ♀ (D.M 2 383).

Sub-genus *MICRONUNCIA* n.sub-gen.

Aedeagus without a sheath, with a pair of lateral processes which are usually pectinate. Eyemound without an apical tubercle. Scute smooth or finely granulate. Maxillary lobes of coxae 2 with a row of five small shiny granules along the anterior margin.

Subgenotype *Nuncia* (*Micronuncia*) *roeweri* n.sp.

Key to the Males of the Sub-genus Micronuncia

1. Lateral processes of the aedeagus pectinate 4
   Lateral processes of the aedeagus smooth or absent 2
2. Lateral processes of the aedeagus absent .... *alpha* n.sp.
   Lateral processes of the aedeagus present 3
3. Eyemound evenly rounded .... *roeweri demissa* n.s.sp.
   Eyemound rising sharply on the anterior surface .... *roeweri pilgrimi* n.s.sp.
4. Aedeagus with a secondary process 5
   Aedeagus without a secondary process 8
5. Secondary process spiniform, originating from immediately behind the lateral processes 7
   Secondary process rod-like, originating from near the base of the aedeagus 6
6. Dorsal surface of pedipalp femur strongly tuberculate ...... *roeweri callida* n.s.sp.
   Dorsal surface of pedipalp femur with only two small tubercles .... *roeweri moderata* n.s.sp.
7. Secondary process equal in length to the lateral processes .... *roeweri* n.sp.
   Secondary process much shorter than the lateral processes ...... *roeweri unica* n.s.sp.
8. Scutal groove present. Tubercle present on the mid-ventral surface of the pedipalp femur .... *roeweri seditiosa* n.s.sp.
   Scutal groove absent. Mid-ventral surface of the pedipalp femur smooth .... *roeweri humilis* n.s.sp.

Nuncia (Micronuncia) roeweri n.sp.

Figs. 271–275

Male Form A

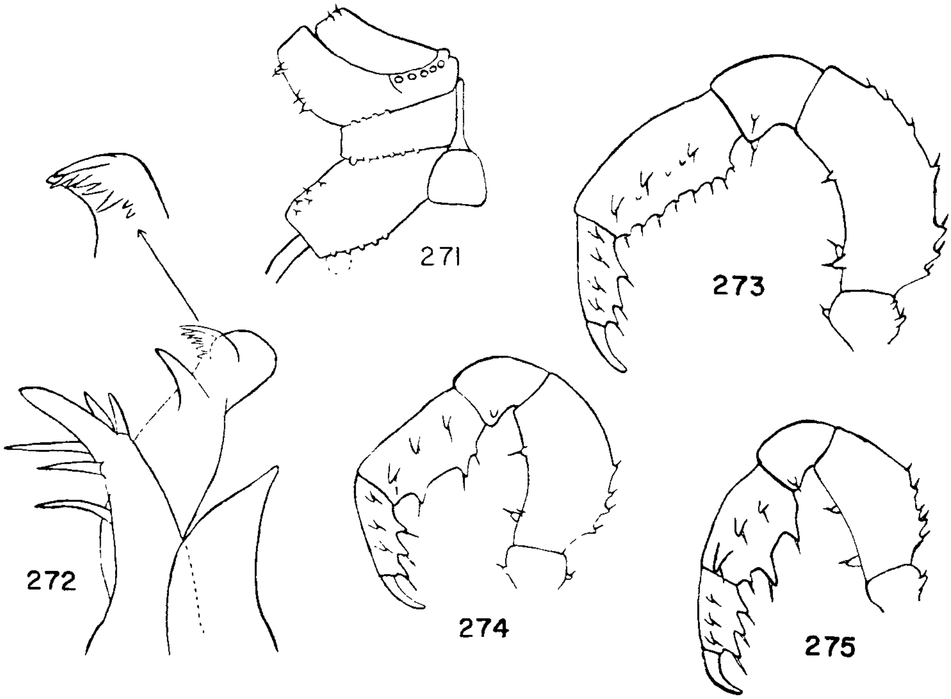
Colour. Ground colour of scute and free tergites pale yellow, with black reticulate markings on the anterior portion of the carapace and black shading over most of the remaining surface of the scute and the free tergites. Dorsal surfaces of chelicera and pedipalps with reticulate black markings.

Body. Scute and free tergites smooth. The eyemound is low, twice as wide as high and flattened apically. There is no scutal groove. Maxillary lobes of coxae 2 with five small bead-like granules along the anterior margin (Fig. 271).

Genitalia. Aedeagus distended apically, with a pair of strong sinuous lateral processes in addition to the combs. Two short, stout superior and three more slender and elongate inferior setae arranged as in Fig. 272.

Chelicerae. Basal segment slender, shiny, with a shallow proximo-dorsal furrow and a small tubercle on the disto-dorsal surface. Second segment with a few small tubercles on the dorsal surface and two stronger tubercles on the distal retro-lateral surface at the base of the movable finger.

Pedipalps (Fig. 273). Trochanter with one small ventral tubercle and two similar dorsal tubercles. Femur with seven dentiform tubercles on the dorsal surface,



Figs. 271-275 *Nuncia (Micronuncia) roeweri* n.sp.
Fig. 271 Coxal region of male, Fig. 272 Male genitalia; Fig. 273 Pro-lateral surface of "Form A" male pedipalp; Fig. 274 Pro-lateral surface of "Form B" male pedipalp; Fig. 275 Pro-lateral surface of female pedipalp.

arranged 3:1:3, and three small ventral tubercles, 2 proximal and the third situated about midway. Patella with a small tubercle on both pro- and retro-ventral surfaces. Retro-ventral surface of tibia with 8-9 small tubercles, pro-ventral margin with three strong tubercles. Tarsus with four pro-ventral and three retro-ventral tubercles.

Legs. Coxae provided with a few small tubercles as shown in Fig. 271. Tarsal formula 3.6.4.4.

Measurements

Scute Length 1.80 Width 1.58

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.48	0.22	0.75	0.40	0.57	0.62	0.48	3.52
Leg 2 ..	0.75	0.26	1.06	0.44	0.88	1.01	1.01	5.41
Leg 3 ..	0.57	0.19	0.66	0.31	0.53	0.57	0.70	3.53
Leg 4 ..	0.84	0.26	1.01	0.44	0.79	1.10	0.75	5.19
Pedipalp ..		0.26	0.88	0.44	0.62		0.40	2.60
Chelicera ..	Basal	0.62	Second	0.79				1.41

Male Form B

Similar in general form to Form A but as shown in Fig. 274 pedipalp differing with four dentiform tubercles on the proximal half of the dorsal surface of the femur and three spiniform tubercles on the retro-ventral surface of the tibia, of which the proximal is small, and three on pro-ventral surface of tarsus.

Measurements

		Scute	Length 1.54		Width 1.36			
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.31	0.18	0.70	0.26	0.48	0.53	0.44	2.90
Leg 2 ..	0.53	0.20	0.88	0.40	0.70	0.75	1.10	4.56
Leg 3 ..	0.48	0.19	0.62	0.22	0.44	0.48	0.57	3.00
Leg 4 ..	0.75	0.22	0.97	0.48	0.62	0.88	0.70	4.62
Pedipalp ..		0.18	0.66	0.35	0.44		0.31	1.94
Chelicera ..	Basal	0.35	Second	0.75				1.10

Female

Scute dark-brown with four pale, chevron markings on the tergal region. Maxillary lobes of coxae 2 smooth. Pedipalp as shown in Fig. 281, similar in form to that of Form B male, but with the third tubercle on retro-ventral surface of tibia small.

Measurements

		Scute	Length 1.67		Width 1.63			
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.44	0.18	0.66	0.35	0.48	0.53	0.53	3.17
Leg 2 ..	0.75	0.22	0.84	0.40	0.70	0.84	0.84	4.59
Leg 3 ..	0.53	0.18	0.53	0.31	0.48	0.48	0.53	3.04
Leg 4 ..	0.79	0.26	0.84	0.40	0.70	0.92	0.62	4.53
Pedipalp ..		0.18	0.57	0.31	0.44		0.31	1.81
Chelicera ..	Basal	0.35	Second	0.66				1.01

Types. Holotype male, Akaroa, October 14, 1949, R. R. Forster (C.M.A. 321). Allotype female, same data (C.M.A. 321).

Paratypes. Sleepy Cove, Akaroa, April 30, 1950, L. P. Hughson, 1 ♂ (A), 1 ♀ (C.M.A. 320); Little Fishermans Bay, Akaroa, April 22, 1950, L. P. Hughson, 1 ♀ (C.M.A. 322); Hickory Bay, Akaroa, January 26, 1952, R. Pilgrim, 2 ♀ (C.M.A. 323); Kaituna Valley, Banks Peninsula, September 1, 1949, R. R. Forster, 1 ♂ (B), 3 ♀ (C.M.A. 324); Okuti Valley, Banks Peninsula, December 10, 1950, R. R. Forster, 1 ♂ (A), 2 ♀ (C.M.A. 325).

Records. Lake Janet, Mount Grey, August 1, 1949, R. R. Forster, 2 ♂ (C.M.A. 326); same locality March 17, 1951, R. R. Forster, 1 ♂, 1 ♀ (C.M.A. 328); Mt. Algidus, February 10, 1946, R. R. Forster, 1 ♂, 1 ♀ (D.M.2/423).

Nuncia (Micronuncia) roeweri humilis n.s.sp.

Figs. 276–281

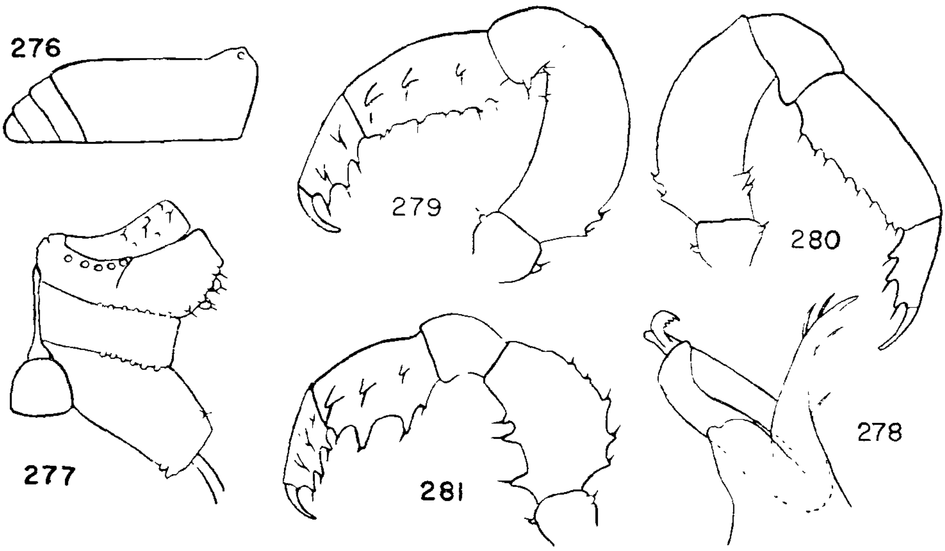
Male

Colour. Scute and free tergites yellow-brown with reticulate markings on both the tergal and cephalothoracic regions of the scute. Dorsal surfaces of both chelicerae and pedipalps with dark-brown reticulate markings.

Body. Scute and free tergites smooth. Eyemound appears in side view as shown in Fig. 276 relatively low, width at base equal to three times height. Scutal groove absent. Maxillary lobes typical (Fig. 277).

Genitalia. Aedeagus as in Fig. 278, with strong lateral processes which extend to the base of the combs. Epimeral setae slender, sub-equal in length.

Chelicera. Basal segment with a shallow proximo-dorsal groove, dorsal surface beyond furrow somewhat distended and with a small distal tubercle. Second segment with few dorsal tubercles.



FIGS. 276-281 *Nuncia* (*Micronuncia*) *roeweri humilis* n.s.sp.
Fig. 276 Lateral view of body; Fig. 277 Coxal region of male; Fig. 278 Male genitalia; Fig. 279 Pro-lateral surface of "Form A" male pedipalp; Fig. 280 Retro-lateral view of "Form A" male pedipalp; Fig. 281 Pro-lateral view of female pedipalp.

Pedipalps (Fig. 279). Trochanter with two small tubercles on both dorsal and ventral surfaces. Femur with two dentiform tubercles on both proximo-dorsal and proximo-ventral surfaces. Tibia with numerous small tubercles along the retro-ventral margin as shown in Fig. 280, and three strong spiniform tubercles along the pro-ventral surface. Tarsus with three spiniform tubercles on both pro- and retro-ventral surfaces.

Legs. Coxae as shown in Fig. 277 ventral surface of coxa 1 and retro-lateral surface of coxa 2 with numerous small rounded or conical tubercles. Pro-lateral surface of coxa 4 with one or two small tubercles. Tarsal formula 3.5.4.4.

Measurements

		Scute	Length 1.85		Width 1.67			
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.44	0.22	0.66	0.31	0.48	0.48	0.46	3.05
Leg 2 ..	0.66	0.26	0.97	0.48	0.70	0.70	0.84	4.61
Leg 3 ..	0.53	0.22	0.66	0.26	0.48	0.44	0.57	3.16
Leg 4 ..	0.79	0.31	0.92	0.44	0.75	0.84	0.57	4.62
Pedipalp ..		0.22 .	0.84	0.40	0.62		0.35	2.43
Chelicera ..	Basal	0.62	Second	0.84				1.46

Female. Differing from male in the structure of the pedipalps as shown in Fig. 281.

Measurements		Scute	Length 1.72		Width 1.58			
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.44	0.20	0.62	0.26	0.48	0.40	0.48	2.88
Leg 2 ..	0.79	0.22	0.79	0.40	0.66	0.66	0.75	4.27
Leg 3 ..	0.57	0.20	0.62	0.26	0.48	0.48	0.48	3.09
Leg 4 ..	0.75	0.26	0.88	0.44	0.75	0.88	0.48	4.44
Pedipalp ..		0.20	0.57	0.22	0.48		0.31	1.78
Chelicera ..	Basal	0.44	Second	0.70				1.14

Types. Holotype male, Riwaka, Nelson, October, 1948, A. W. Parrott (C.M.A. 310); Allotype female, same data (C.M.A. 311); Paratypes: same data, 3 ♂ (C.M.A. 312, D.M.2/410).

Records. Reservoir, Nelson, September, 1948, R. A. Cumber, 1 ♀ (C.M.A. 313).

Remarks. The male described is of Form A, and may be separated from *roeweri* by the presence of only two tubercles on the pro-ventral margin of the tibia of the pedipalp.

Nuncia (Micronuncia) roeweri moderata n.s.sp.

Figs. 282–287

Male

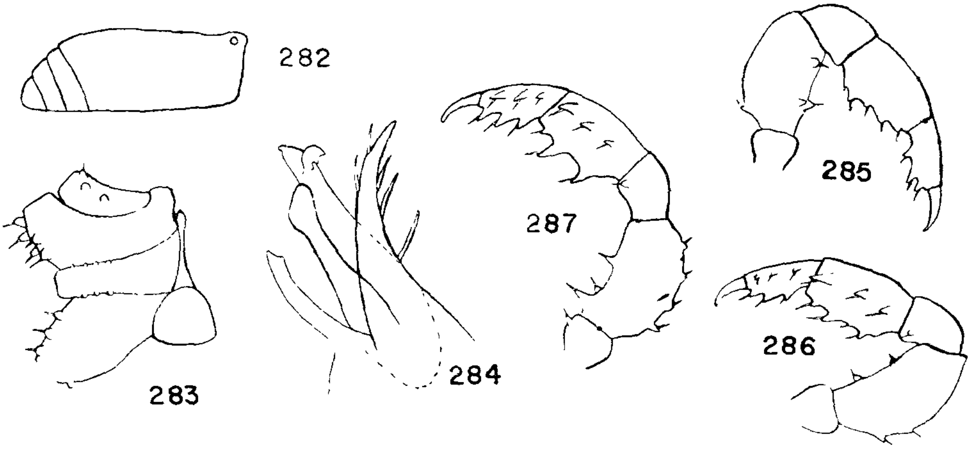
Colour. Ground colour of scute reddish-brown with black reticulate markings on the anterior surface of the carapace and immediately behind the eyemound. A black band extends down each lateral margin. Free tergites pale-brown.

Body. Scute and free tergites finely and evenly granulate. The eyemound is low and appears in lateral view as shown in Fig. 277. Scutal groove absent. Maxillary lobes of coxae 2 smooth, without granules (Fig. 278).

Genitalia (Fig. 284). Aedeagus tube-like, apical portion stout, lateral combs small, with only two to three serrations. Strong lateral processes present, extending from the base of the aedeagus to the lateral combs. Setae slender and relatively long. There are two superior and three inferior setae present.

Chelicerae. Basal segment with a shallow proximo-dorsal groove and a small disto-dorsal tubercle. Second segment smooth.

Pedipalps (Figs. 285, 286). Trochanter smooth. Femur with two dentiform tubercles on the proximal half of the dorsal surface, two small proximo-ventral tubercles and a further tubercle on the ventral surface at about two-thirds. Tibia with five tubercles on the retro-ventral surface of which three are spiniform, three spiniform tubercles present on the pro-ventral margin of tibia and both pro- and retro-ventral margins of tarsus.,



FIGS. 282-287 *Nuncia* (*Micronuncia*) *roeweri moderata* n.s.sp.

Fig. 282 Lateral view of body; Fig. 283 Coxal region of male; Fig. 284 Male genitalia; Fig. 285 Retro-lateral surface of male pedipalp; Fig. 286 Pro-lateral surface of male pedipalp; Fig. 287 Pro-lateral surface of female pedipalp.

Legs. Coxae as in Fig. 283. Small somewhat rounded tubercles present on the ventral surface of coxa 1, retro-lateral surface of coxa 2 and the pro-lateral surface of coxa 4. Tarsal formula 2.5.4.4. The distal segment of tarsus 1 is distended, twice as deep as the basal segment.

Measurements

Scute Length 1.41 Width 1.23

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	0.35	0.14	0.53	0.22	0.40	0.35	0.44	2.43
Leg 2	0.62	0.18	0.70	0.40	0.57	0.62	0.66	3.75
Leg 3	0.44	0.13	0.44	0.22	0.35	0.35	0.40	2.33
Leg 4	0.62	0.22	0.70	0.35	0.57	0.70	0.53	3.69
Pedipalp		0.14	0.48	0.22	0.40		0.31	1.55
Chelicera	Basal	0.31	Second	0.48				0.79

Female. Similar in structure to male. Pedipalps differing in minor structure as shown in Fig. 287.

Measurements

Scute Length 1.58 Width 1.41

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	0.35	0.18	0.48	0.26	0.35	0.35	0.40	2.37
Leg 2	0.66	0.22	0.66	0.35	0.57	0.62	0.66	3.74
Leg 3	0.48	0.21	0.40	0.22	0.35	0.35	0.40	2.41
Leg 4	0.66	0.26	0.70	0.35	0.58	0.84	0.44	3.38
Pedipalp		0.15	0.53	0.22	0.34		0.26	1.50
Chelicera	Basal	0.29	Second	0.44				0.73

Types. Holotype male, Maungamanu Reserve, Kaikoura, December 8, 1946, A. J. Healy (D.M.2/430); Allotype female, same data (D.M.2/431); Paratype ♂, same data (C.M.A. 348).

Remarks. In this sub-species the two distal segments of the tarsus of Leg 1 have fused forming a bisegmented tarsus which separates it from all other forms.

Nuncia (Micronuncia) roeweri callida n.s.sp.

Figs. 288–294

Male Form A

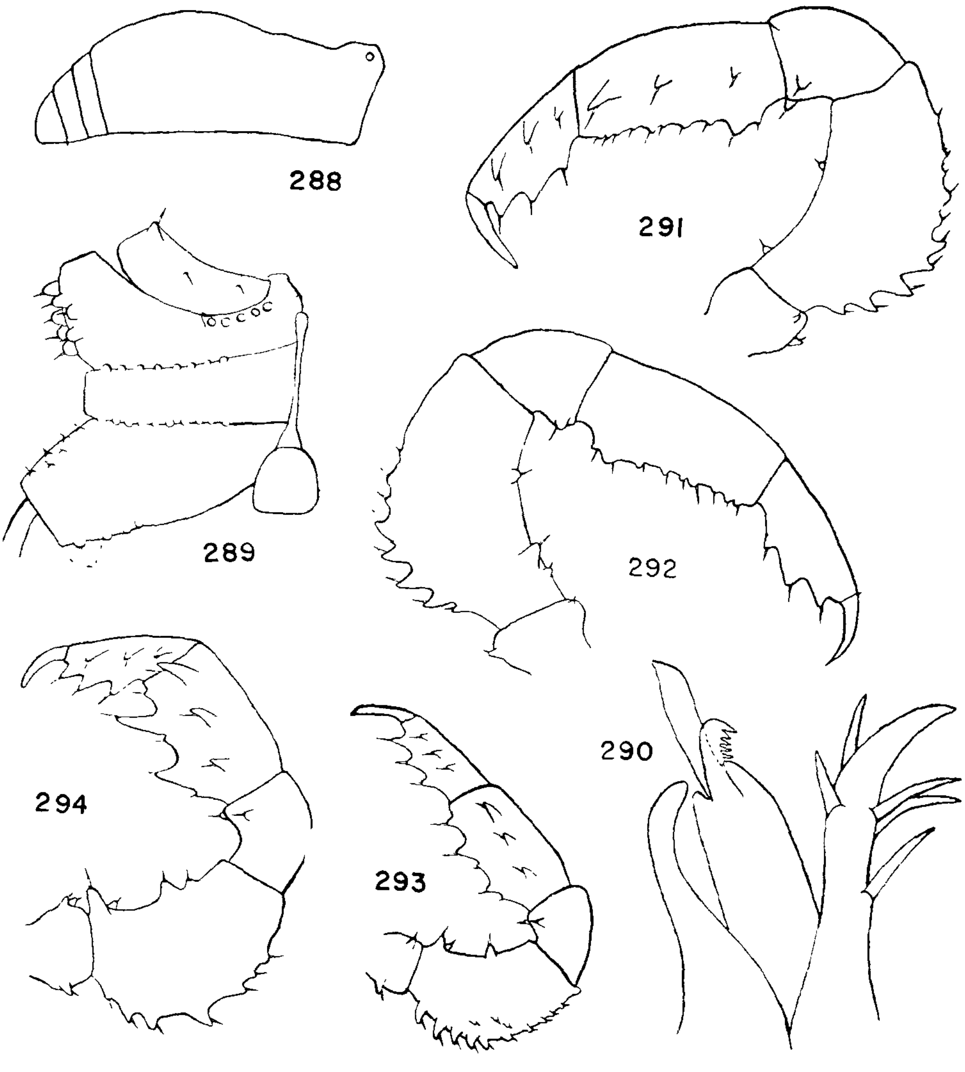
Colour. Ground colour of scute and free tergites reddish-brown with black reticulate markings on the anterior portion of the carapace and heavy black shading on the remaining surface of the scute. Dorsal surfaces of chelicerae and pedipalps with black reticulate markings.

Body. Scute and free tergites finely coriaceous. The eyemound is low, three times as wide as it is high, sloping sharply up from the anterior margin of the carapace to a short apical peak as shown in Fig. 288. Scutal groove absent. Maxillary lobes of coxae 2 typical (Fig. 289).

Genitalia. Apical portion of aedeagus stout and relatively long, combs with four-five pectinations. No lateral processes. Epimeral setae stout, disposed as shown in Fig. 290.

Chelicerae. Basal segment with a shallow proximo-dorsal furrow and a strong dentiform tubercle on the disto-dorsal surface. Second segment smooth.

Pedipalps (Figs. 291, 292). Trochanter with small tubercles on both dorsal and ventral surfaces. There is a row of small tubercles along the dorsal surface of the



Figs. 288-294 *Nuncia* (*Micronuncia*) *roeweri callida* n.s.sp.
Fig. 288 Lateral view of body; Fig. 289 Coxal region of male; Fig. 290 Male genitalia; Fig. 291 Pro-lateral surface pedipalp "Type A" male; Fig. 292 Retro-lateral surface pedipalp "Type A" male; Fig. 293 Pro-lateral surface pedipalp "Type B" male; Fig. 294 Pro-lateral surface female pedipalp.

femur, dentiform on proximal half of the segment, rounded on the distal half, and a strong conical tubercle on the sub-proximal-ventral surface, preceded by a small rounded tubercle. There is a similar slightly larger tubercle near the mid-ventral surface. Retro-ventral margin of tibia provided with numerous small, closely spaced tubercles. Pro-ventral margin of tibia and both pro- and retro-ventral margins of tarsus with three spiniform tubercles.

Legs. Coxae as shown in Fig. 289. There are three conical tubercles on the ventral surface of coxa 1, a group of large rounded tubercles on the retro-lateral surface of coxa 2 and similar group of smaller tubercles on the pro-lateral margin of coxa 4. Femora of all legs with a prominent ventral row of granules. Tarsal formula 3.6.4.4.

Measurements

		Scute	Length 2.42		Width 2.24			
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	0.57	0.26	0.97	0.44	0.62	0.66	0.70	4.02
Leg 2	1.10	0.27	1.19	0.70	1.06	1.19	1.50	7.01
Leg 3	0.88	0.26	0.70	0.44	0.75	0.75	0.97	4.75
Leg 4	1.10	0.44	1.28	0.70	1.10	1.32	1.01	6.95
Pedipalp		0.22	0.97	0.53	1.01		0.53	3.26
Chelicera	Basal	0.88	Second	1.01				1.89

Male Form B

Similar to Form A in general structure. Pedipalps with three well developed spinous tubercles on the retro-ventral margin of the tibia (Fig. 293).

Measurements

		Scute	Length 1.85		Width 1.89			
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	0.53	0.26	0.97	0.44	0.66	0.70	0.70	4.26
Leg 2	0.84	0.26	1.19	0.53	1.06	1.10	1.19	6.17
Leg 3	0.66	0.22	0.79	0.40	0.70	0.75	0.70	4.22
Leg 4	1.06	0.35	1.14	0.57	0.97	1.32	1.01	6.42
Pedipalp		0.26	0.79	0.40	0.62		0.48	2.55
Chelicera	Basal	0.48	Second	0.70				1.18

Female

More heavily marked with black than male. Maxillary lobes smooth. Pedipalp as shown in Fig. 289 with two strong conical tubercles on the proximo-ventral surface of the femur and two smaller tubercles immediately beyond the median surface; two very strong spinous tubercles on the retro-ventral margin of the tibia.

Measurements

		Scute	Length 2.33		Width 2.20			
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	0.48	0.22	0.88	0.48	0.66	0.62	0.62	3.96
Leg 2	0.75	0.26	1.19	0.66	0.97	1.10	1.14	6.07
Leg 3	0.70	0.26	0.66	0.40	0.66	0.66	0.70	4.04
Leg 4	1.10	0.40	1.14	0.62	0.97	1.32	0.88	6.43
Pedipalp		0.22	0.70	0.44	0.66		0.40	2.42
Chelicera	Basal	0.40	Second	0.66				1.06

Types. Holotype male (A), Taieri, Dunedin, January 26, 1951, R. R. Forster (C.M.A. 336); Allotype female, same data (C.M.A. 337). Paratypes: same data, 6 ♂ (1A, 5B), 6 ♀ (C.M.A. 339, D.M.2/424).

Records. Dunedin, March, 1944, B. J. Marples, 1 ♂ (B), 1 ♀ (C.M.A. 340); Town Belt, Dunedin, October 5, 1937, B. J. Marples, 1 ♂ (A) (C.M.A. 341); Opoho Bush, Dunedin, January, 1946, T. H. Smith, 1 ♂ (A), 1 ♀ (D.M.2/425); Whare Flat, Dunedin, February 4, 1938, B. J. Marples, 1 ♀ (D.M.2/426); Mount Cargill, Dunedin, February 9, 1946, R. R. Forster, 1 ♂ (A), 1 imm. (D.M.2/427); Duntroon, Otago, May 18, 1948, B. J. Marples, 2 ♂ (A), 2 ♀ (C.M.A. 916); Purakanui, March 10, 1937, B. J. Marples, 1 ♂ (A) (C.M.A. 920); Otekaieke, December 21, 1919, 1 ♂ (A) (C.M.A. 921); Tapanui, Otago, January 25, 1951, R. R. Forster, 4 ♂ 2 (A), 2 (B), 4 ♀ (C.M.A. 344, 346); Morton Mains, Southland, January, 1951, R. Jenkin, 7 ♂ 3 (A), 4 (B), 3 ♀ (C.M.A. 347); Orepuki, Southland, May, 1949, J. H. Sorensen, 2 ♂ (A), 3 ♀ (C.M.A. 343).

Psalenoba (Micronuncia) roeweri unica n.s.sp.

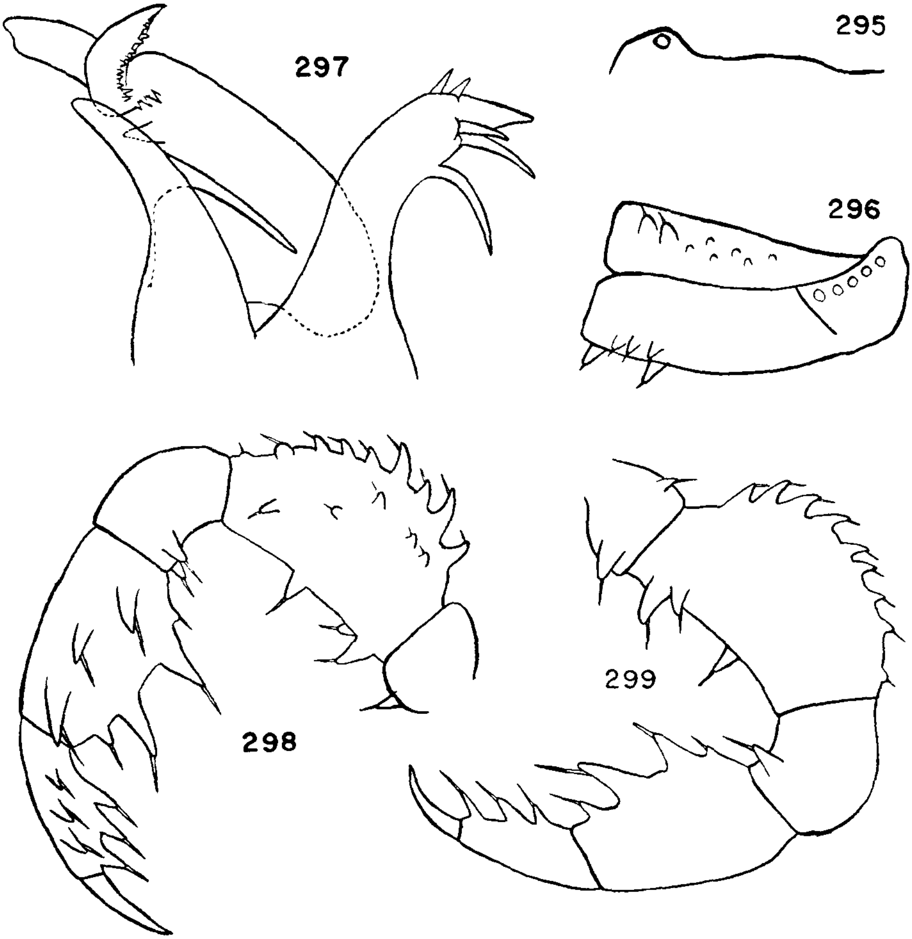
Figs. 295–299

Male

Colour. Reddish-brown.

Body. The eyemound is low and rounded (Fig. 295). The scute is smooth, scutal groove shallow. Maxillary lobes with five small rounded granules (Fig. 296).

Genitalia. The aedeagus is provided with a pair of strongly pectinate combs and a pair of small triangular lobes on the dorsal surface immediately behind the combs (Fig. 297). The two superior epimeral setae are short and stout, proximal inferior setae long, two distal inferior subequal in length.



Figs. 295-299 *Nuncia* (*Micronuncia*) *roeweri unica* n.s.sp.
Fig. 295 Lateral view of carapace and eyemound; Fig. 296 Coxae 1 and 2 of male; Fig. 297 Male genitalia; Fig. 298 Pro-lateral surface male pedipalp; Fig. 299 Retro-lateral surface male pedipalp.

Chelicera. Normal.

Pedipalps (Figs. 298, 299). Trochanter with a strong ventral and smaller dorsal tubercle. Dorsal surface of femur with a row of strong dentiform tubercles extending along the dorsal surface, a pair of strong conical tubercles on the proximo-ventral surface, fused at the base, and a similar mid-ventral tubercle. Patella with a conical tubercle on both pro- and retro-lateral surfaces. There are four tubercles present on the retro-lateral surface of the tibia, first and fourth small, and three strong spinous tubercles on the pro-ventral surface of the tibia and both ventral margins of the tarsus.

Legs. There are two tubercles on the disto-ventral surface of coxa 1, and few small conical tubercles on the retro-lateral surface of coxa 2 (Fig. 291) and on the pro-lateral surface of coxa 4. Tarsal formula 3.6.4.4.

Measurements

Scute Length 2.02 Width 1.80

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.53	0.22	0.75	0.40	0.66	0.75	0.57	3.88
Leg 2 ..	0.92	0.26	1.14	0.48	1.01	1.01	1.23	6.05
Leg 3 ..	0.66	0.22	1.19	0.35	0.66	0.70	0.62	4.40
Leg 4 ..	0.92	0.31	1.01	0.53	0.92	1.36	0.79	5.84
Pedipalp ..		0.22	0.84	0.31	0.66		0.35	2.38
Chelicera ..	Basal	0.56	Second	0.90				1.46

Female

Maxillary lobes smooth, otherwise similar in structure to male.

Measurements

Scute Length 1.98 Width 1.94

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.48	0.22	0.75	0.40	0.57	0.66	0.53	3.61
Leg 2 ..	0.88	0.26	0.92	0.53	0.88	0.88	1.10	5.45
Leg 3 ..	0.57	0.22	0.66	0.40	0.62	0.66	0.57	3.70
Leg 4 ..	0.88	0.31	1.10	0.57	0.92	1.32	0.70	5.80
Pedipalp ..		0.22	0.75	0.40	0.57		0.35	2.29
Chelicera ..	Basal	0.53	Second	0.88				1.41

Types. Holotype male, Meads Landing, Lake Hawea, January 20, 1951, R. R. Forster (C.M.A. 306); Allotype female, same data (C.M.A. 307); Paratypes, same data, 1 ♀, 1 imm. (C.M.A. 308).

Nuncia (Micronuncia) roeweri seditiosa n.s.sp.

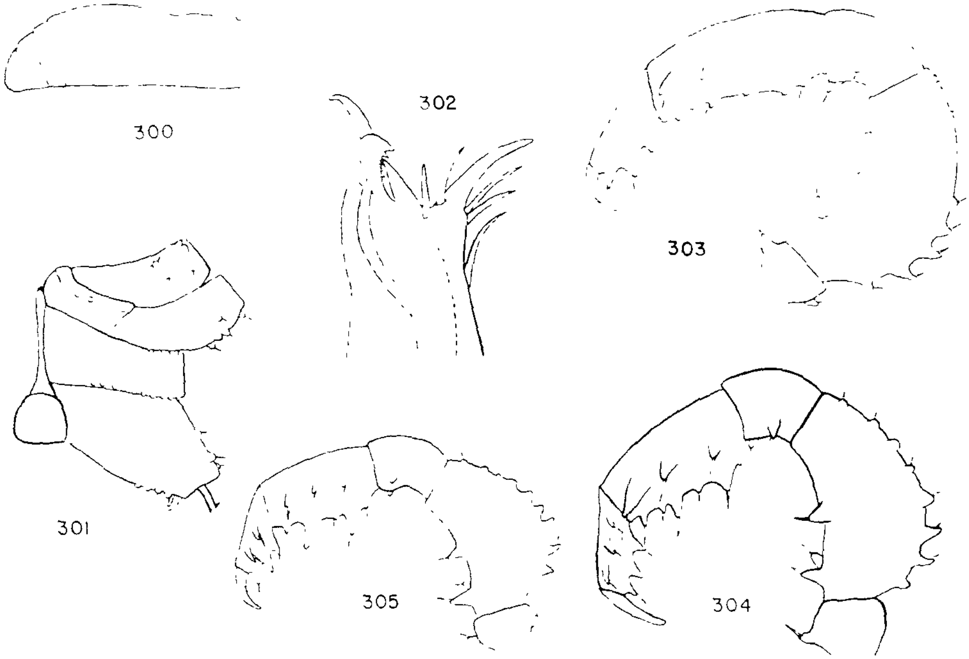
Figs. 300–305

Male Form A

Colour. General colour of scute and free tergites pale yellow, with pale brown shading. Dorsal surfaces of chelicerae and pedipalps with pale reticulate markings on the dorsal surface.

Body. Scute and free tergites smooth. Eyemound low, wider than high in the ratio of 7:4, sloping up rather steeply from the anterior margin of the carapace to the apex above the eyes behind which it slopes gently down (Fig. 300). Scutal groove shallow but distinct. Maxillary lobes of coxae 4 typical (Fig. 301).

Genitalia (Fig. 302). Apical portion of the aedeagus beyond the combs slender. Combs well developed and strongly pectinate. Setae of ventral plates strong.



FIGS. 300-305 *Nuncia* (*Micronuncia*) *roeweri seditiosa* n.s.sp.
Fig. 300 Lateral view of body; Fig. 301 Coxal region of male; Fig. 302 Male genitalia; Fig. 303 Pro-lateral surface pedipalp "Form A" male; Fig. 304 Pro-lateral surface pedipalp "Form B" male; Fig. 305 Pro-lateral surface female pedipalp.

Chelicerae. Basal segment with a shallow proximo-dorsal groove and a small tubercle on the mid-dorsal surface and a stronger more dentiform tubercle on the disto-dorsal surface. Second segment with a few small tubercles on the dorsal surface.

Pedipalps (Fig. 303). Trochanter with a strong spinous ventral tubercle and smaller dorsal. There are two tubercles on the proximo-ventral surface of the femur, the retro-lateral tubercle is strong and spinous, the pro-lateral is small and rounded. There are two further tubercles on the ventral surface, one median, and one subdistal in position. The dorsal surface is provided with dentiform tubercles on the proximal half and rounded tubercles on the distal half. Retro-ventral margin of the tibia with only small tubercles; pro-ventral margin with three spinous tubercles of which the distal is strong and prominent. Tarsus with three spiniform tubercles on both ventral margins.

Legs. There are two pair of tubercles on the ventral surface of coxa 1 spaced as shown in Fig. 301. Retro-lateral surface of coxa 2 and pro-lateral surface of coxa 4 with a few small rounded tubercles. Tarsal formula 3.5–6.4.4.

Measurements

Scute Length 2.20 Width 1.94

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.66	0.26	0.97	0.48	0.57	0.57	0.75	4.26
Leg 2 ..	1.06	0.31	1.32	0.53	1.01	1.10	1.14	6.47
Leg 3 ..	0.70	0.26	0.70	0.40	0.62	0.66	0.75	4.09
Leg 4 ..	0.88	0.35	1.23	0.62	1.06	1.32	0.88	6.34
Pedipalp ..		0.22	1.14	0.44	0.97		0.44	3.21
Chelicera ..	Basal	0.97	Second	1.06				2.03

Male Form B

Similar in general form with Form A but differing in the structure of the pedipalp. There are two equally developed strong spinous tubercles on the proximoventral surface of the femur and a third similar tubercle on the mid-ventral surface. The retro-ventral margin of the tibia with three strong spinous tubercles in addition to a few smaller tubercles (Fig. 304).

Measurements

	Scute		Length 1.85		Width 1.67			
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.44	0.22	0.70	0.40	0.57	0.62	0.57	3.52
Leg 2 ..	0.75	0.26	1.10	0.48	0.88	0.97	0.97	5.41
Leg 3 ..	0.57	0.20	0.66	0.40	0.53	0.57	0.62	3.55
Leg 4 ..	0.88	0.31	0.92	0.44	0.88	1.32	0.48	5.23
Pedipalp ..		0.26	0.88	0.31	0.66		0.44	2.55
Chelicera ..	Basal	0.66	Second	0.88				1.54

Female

Similar in appearance to Form B male, but differing in that the first two spinous tubercles on the retro-ventral margin of the tibia of the pedipalp are stronger (Fig. 305). The maxillary lobes are smooth.

Measurements

		Scute	Length 1.98		Width 1.85			
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.53	0.22	0.79	0.44	0.53	0.57	0.48	3.56
Leg 2 ..	0.88	0.26	1.01	0.53	0.84	0.88	0.92	5.32
Leg 3 ..	0.57	0.22	0.66	0.31	0.57	0.62	0.62	3.57
Leg 4 ..	0.92	0.31	0.88	0.48	0.84	0.97	0.70	5.10
Pedipalps		0.20	0.88	0.40	0.57		0.35	2.40
Chelicerae	Basal	0.62	Second	1.01				1.63

Types. Holotype male (A), Beehive, North side of Lake Manapouri, February 2, 1946, R. R. Forster (D.M.2/411); Allotype female, same data (D.M.2/412); Paratypes: same data, 1 ♂ (A) (C.M.A. 314); South side of Lake Manapouri, February 6, 1946, R. R. Forster, 1 ♂ (A), 1 ♀ (D.M.2/810); Eglinton Valley, Deeember 11, 1944, J. T. Salmon, 1 ♀ (D.M.2/417); Lower Eglinton Valley, February 6, 1946, R. R. Forster, 1 ♂ (B), 2 ♀ (D.M.2/416).

Records. Halfmoon Bay, Stewart Island, November 10, 1948, O. Allan, 1 ♂ (B) (C.M.A. 316); Halfmoon Bay, June, 1950, O. Allan, 2 ♂ (1 A, 1 B (C.M.A. 915); Garden Mound, Stewart Island, November 21, 1946, R. R. Forster, 2 ♂, 1 A, 1 B (C.M.A. 413); Akers Point, Stewart Island, November 20, 1946, R. R. Forster, 1 ♂, A (D.M.2/415).

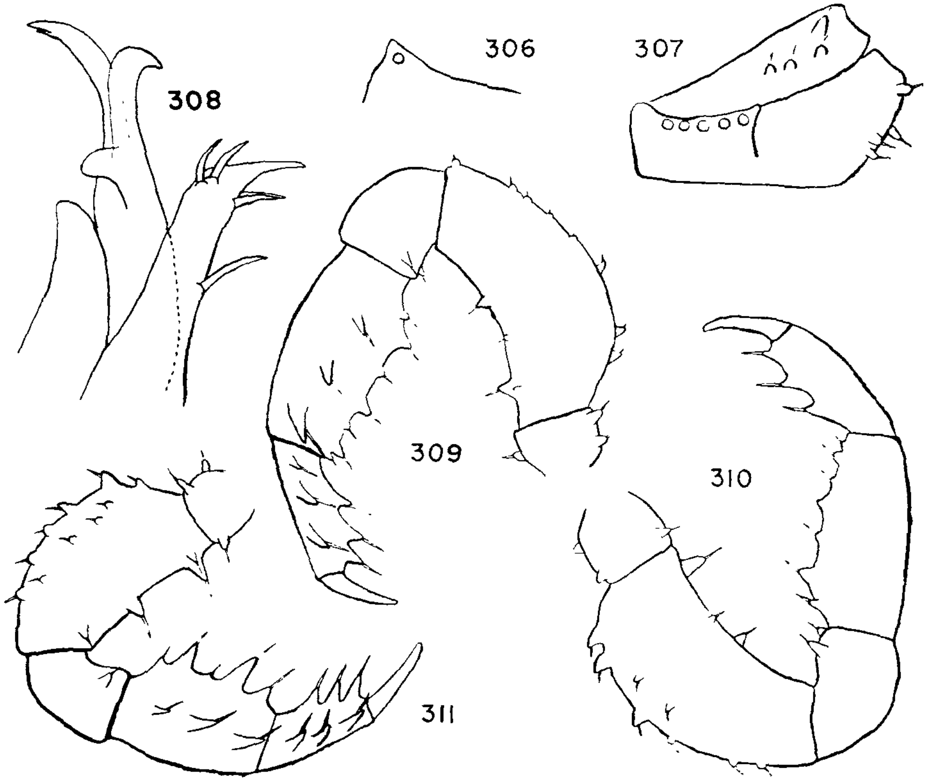
Nuncia (Micronuncia) roeweri gelida n.s.sp.

Figs. 306–311

Male

Colour. The general colour of the body is pale yellow, with reticulate black markings on the carapace and faint shading on the tergal region. Free tergites and sternites without shading.

Body. The eyemound is low and sub-conical (Fig. 306). Scute smooth, with a slight scutal groove. Free tergites and sternites smooth. Maxillary lobes of coxae 2 typical with five granules (Fig. 307).



FIGS. 306-311 *Nuncia* (*Micronuncia*) *roeweri gelida* n.s.sp.
Fig. 306 Lateral view of eyemound; Fig. 307 Coxae 1 and 2 of male; Fig. 308 Male genitalia; Fig. 309 Pro-lateral surface of male pedipalp; Fig. 310 Retro-lateral surface of male pedipalp; Fig. 311 Pro-lateral surface of female pedipalp.

Genitalia (Fig. 308). Distal portion of aedeagus stout but pointed apically, with a small sub-apical spine; lateral combs well developed but not serrated, with a pair of prominent secondary lobes near the base. Setae strong, three inferior, one median, two sub-distal, two superior.

Chelicerae. Normal.

Pedipalps (Figs. 309–310). Trochanter with two small dorsal, one ventral tubercles. Dorsal surface of femur with three dentiform tubercles on the proximal half and five rounded tubercles on the distal half; ventral surface with a strong conical tubercle on the proximo-ventral surface, a pair of small tubercles at about one third and a stronger tubercle midway. Trochanter with two tubercles, one pro-lateral, one retro-lateral. Tibia stout with seven rounded tubercles on the pro-ventral margin and three stronger spinous tubercles on the retro-ventral margin. Tarsus with three spinous tubercles on both ventral margins.

Legs. Unarmed. Tarsal formula 3.5.4.4.

Measurements

Scute	Length 1.85	Width 1.54

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.48	0.20	0.66	0.35	0.53	0.57	0.57	3.36
Leg 2 ..	0.75	0.22	0.88	0.44	0.84	0.79	0.97	4.89
Leg 3 ..	0.62	0.20	0.57	0.31	0.48	0.57	0.53	3.28
Leg 4 ..	0.84	0.31	0.93	0.48	0.79	0.97	0.70	5.02
Pedipalp ..		0.20	0.79	0.31	0.66		0.40	2.36
Chelicera ..	Basal	0.66	Second	0.75				1.41

Female

The ground colour is pale yellow, but the scute is heavily shaded with black and there are four black chevrons on the tergal region. Free tergites heavily shaded. General structure similar to male but pedipalps weaker, with three strongly developed spinous tubercles on the retro-ventral surface of the tibia (Fig. 311).

Measurements

		Scute	Length 1.80		Width 1.58			
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.44	0.20	0.66	0.31	0.44	0.48	0.48	3.01
Leg 2 ..	0.75	0.22	0.79	0.44	0.70	0.79	0.75	4.44
Leg 3 ..	0.62	0.20	0.48	0.26	0.53	0.44	0.44	2.97
Leg 4 ..	0.79	0.26	0.88	0.44	0.76	0.92	0.62	4.67
Pedipalp ..		0.20	0.66	0.26	0.44		0.31	1.87
Chelicera ..	Basal	0.53	Second	0.70				1.23

Types. Holotype male, Franz Josef, Westland, April 26, 1951, R. R. Forster (C M.A. 317); Allotype female, same data (C.M.A. 318); Paratypes, same data, 1 ♀ (D.M. 2/418); Franz Josef, January 5, 1951, R. Jacobs, 1 ♂, 1 ♀ (C.M.A. 318).

Nuncia (Micronuncia) roeweri pilgrimi n.s.sp.

Figs. 312–317

Male Form A

Colour. Pale yellowish-brown with faint markings.

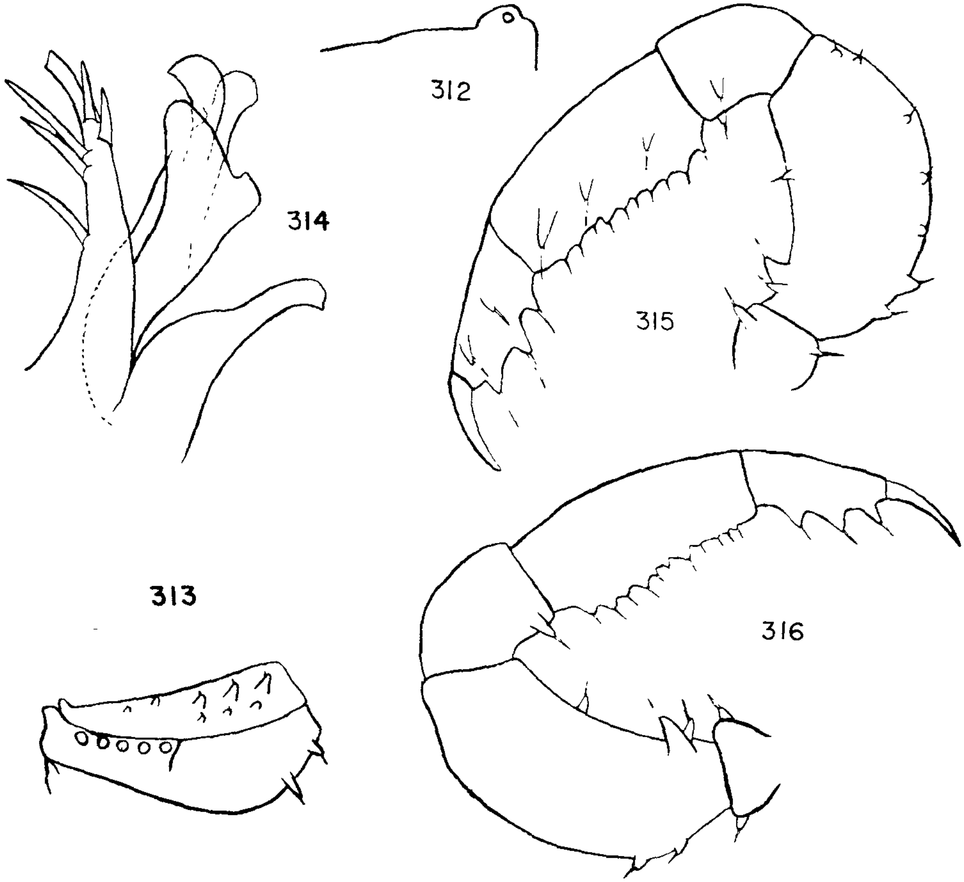
Body. The eyemound is low, rising from immediately behind the eyemound to a rounded apex in front of the eyes and sloping down posteriorly (Fig. 312). The scutal groove is shallow.

Genitalia. The aedeagus is as shown in Fig. 314, with a broad sheath and well developed non-serrated combs. The ventral plates are slender, superior setae well developed, equal in length to almost two-thirds of the length of the inferior setae.

Chelicerae. Normal.

Pedipalps (Figs. 315, 316). Trochanter with a conical tubercle on both dorsal and ventral surfaces. The femur is relatively stout, with two broad conical tubercles on the proximo-dorsal surface and from 5–6 smaller rounded tubercles. There are two spinous tubercles on the proximo-ventral surface of which the outer is stronger, and a single small mid-ventral tubercle. Patella with a small conical tubercle on both pro- and retro-lateral surfaces. Tibia with three normal spinous tubercles on the pro-ventral margin but retro-ventral margin provided with numerous small tubercles. Tarsus with two pro- and three retro-ventral spinous tubercles.

Legs. There is a row of five small conical tubercles on the ventral surface of coxa 1 and two on retro-lateral surface of coxa 2 (Fig. 313). Tarsal formula 3.5.4.4.



FIGS. 312-317 *Nuncia* (*Micronuncia*) *roeweri pilgrimi* n.s.sp.
Fig. 312 Lateral view of carapace and eyemound; Fig. 313 Coxae 1 and 2 of male; Fig. 314 Male genitalia; Fig. 315 Pro-lateral surface of male pedipalp; Fig. 316 Retro-lateral surface of male pedipalp; Fig. 317 Pro-lateral surface of female pedipalp.

Measurements

Scute Length 1.94 Width 1.67

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.44	0.22	0.75	0.40	0.57	0.48	0.48	3.34
Leg 2 ..	0.79	0.26	0.97	0.53	0.88	0.92	0.75	5.10
Leg 3 ..	0.66	0.22	0.62	0.31	0.53	0.53	0.52	3.39
Leg 4 ..	0.84	0.26	0.88	0.44	0.79	0.97	0.66	4.84
Pedipalp ..		0.22	0.88	0.40	0.69		0.40	2.59
Chelicera ..	Basal	0.75	Second	0.79				1.54

Male Form B

The pattern on the scute is more clearly defined. First segment of the chelicerae is much shorter than "Form A". Tibia of pedipalp shorter and less robust, with three spinous tubercles on the retro-ventral margin (Fig. 317).

Measurements

		Scute	Length 1.72		Width 1.41			
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.44	0.22	0.66	0.35	0.53	0.40	0.44	3.04
Leg 2 ..	0.79	0.26	0.88	0.48	0.79	0.79	0.70	4.69
Leg 3 ..	0.62	0.22	0.57	0.31	0.48	0.48	0.53	3.21
Leg 4 ..	0.79	0.26	0.88	0.44	0.79	0.97	0.54	4.67
Pedipalp ..		0.20	0.70	0.26	0.53		0.35	2.04
Chelicera ..	Basal	0.53	Second	0.70				1.23

Types. Holotype male (A), Pelorus Bridge, December 20, 1951, R. Pilgrim (C.M.A. 333); Paratype, same data, 1 ♂ (B) (C.M.A. 334).

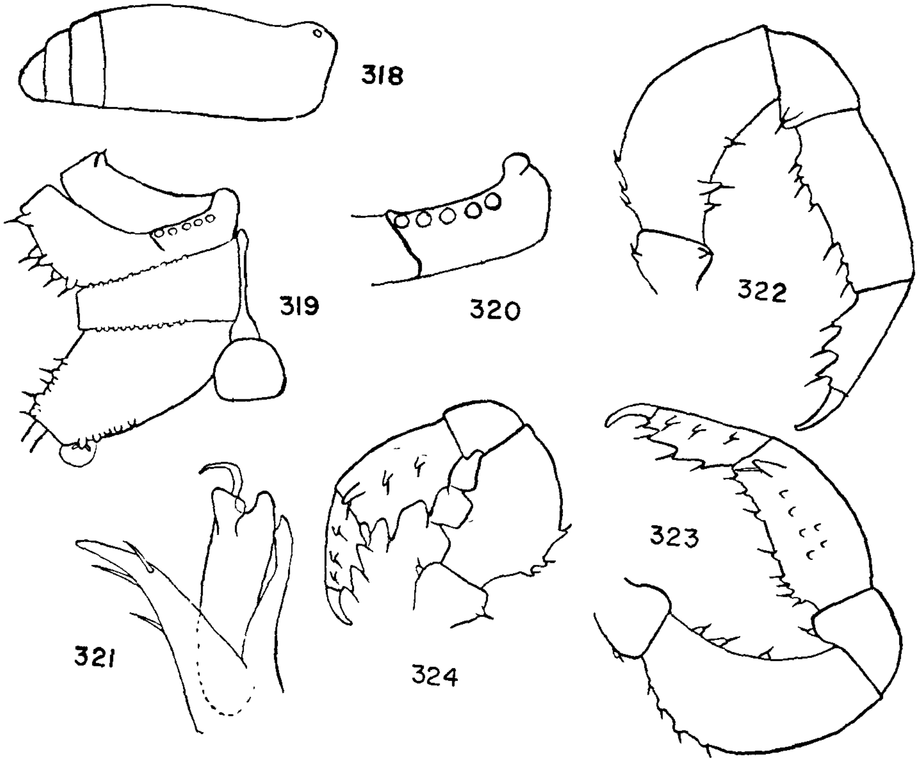
Nuncia (Micronuncia) roeweri demissa n.s.sp.

Figs. 318–324

Male

Colour. Ground colour of scute pale orange-brown with dark reticulate markings on the anterior surface of the carapace. Faint reticulate markings on the dorsal surfaces of chelicerae and pedipalps.

Body. Scute smooth. Eyemound low, width at base is equal to three times its height,



FIGS. 318-324 *Nuncia (Micronuncia) roeweri demissa* n.s.sp.

Fig. 318 Lateral view of body; Fig. 319 Coxal region of male; Fig. 320 Maxillary lobe of coxa 2; Fig. 321 Male genitalia; Fig. 322 Retro-lateral surface male pedipalp; Fig. 323 Pro-lateral surface of male pedipalp; Fig. 324 Pro-lateral surface of female pedipalp.

and evenly rounded (Fig. 318). Scutal groove absent. Maxillary lobes of coxae 2 with five smooth granules along the anterior margin (Fig. 320).

Genitalia (Fig. 321). Apical portion of aedeagus slender and curved. Combs without pectinations. Setae long and slender, one superior, two inferior.

Chelicerae. Basal segment with a shallow proximo-dorsal furrow and a small disto-dorsal tubercle. Second segment smooth.

Pedipalps (Figs. 322, 323). Trochanter with small tubercle on both dorsal and ventral surfaces. Femur with four small tubercles on the proximo-dorsal surface, two proximo-ventral tubercles, of which the second is strong and spiniform and a further small mid-ventral tubercle. Retro-ventral margin of tibia without spiniform tubercles, but with a proximal and a distal group of small rounded tubercles, pro-ventral margin of tibia with a strong distal spinous tubercle and a number of small rounded tubercles along the median surfaces. Tarsus with three spinous tubercles on both pro- and retro-ventral margins.

Legs. Coxae as in Fig. 319. There is a single tubercle on the disto-ventral surface of coxa 1 and a number of tubercles on the retro-lateral surface of coxa 2 and the pro-lateral surface of coxa 4. Tarsal formula 3.5.4.4.

Measurements

Scute Length 1.98 Width 1.80

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.53	0.22	0.88	0.40	0.53	0.62	0.48	3.66
Leg 2 ..	0.84	0.26	1.10	0.44	0.88	0.92	0.84	5.26
Leg 3 ..	0.70	0.22	0.57	0.31	0.48	0.48	0.53	3.29
Leg 4 ..	0.88	0.31	0.97	0.48	0.84	1.01	0.70	5.19
Pedipalp ..		0.22	0.92	0.44	0.70		0.44	2.72
Chelicera ..	Basal	0.48	Second	0.84				1.32

Female

Scute with heavy black markings. Maxillary lobes smooth. Pedipalp as in Fig. 324, differing from male in possessing but two tubercles on the ventral surface of the femur. These are equal in size, conical, one proximal, one median in position. Tibia with three spinous tubercles on both pro- and retro-ventral surfaces.

Measurements

Scute Length 1.76 Width 1.63

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.48	0.22	0.62	0.44	0.48	0.48	0.44	3.16
Leg 2 ..	0.70	0.26	0.88	0.48	0.70	0.66	0.79	4.47
Leg 3 ..	0.57	0.22	0.57	0.26	0.48	0.44	0.48	3.02
Leg 4 ..	0.84	0.26	0.88	0.44	0.75	0.92	0.57	4.66
Pedipalp ..		0.18	0.75	0.26	0.44		0.31	1.94
Chelicera ..	Basal	0.40	Second	0.70				1.10

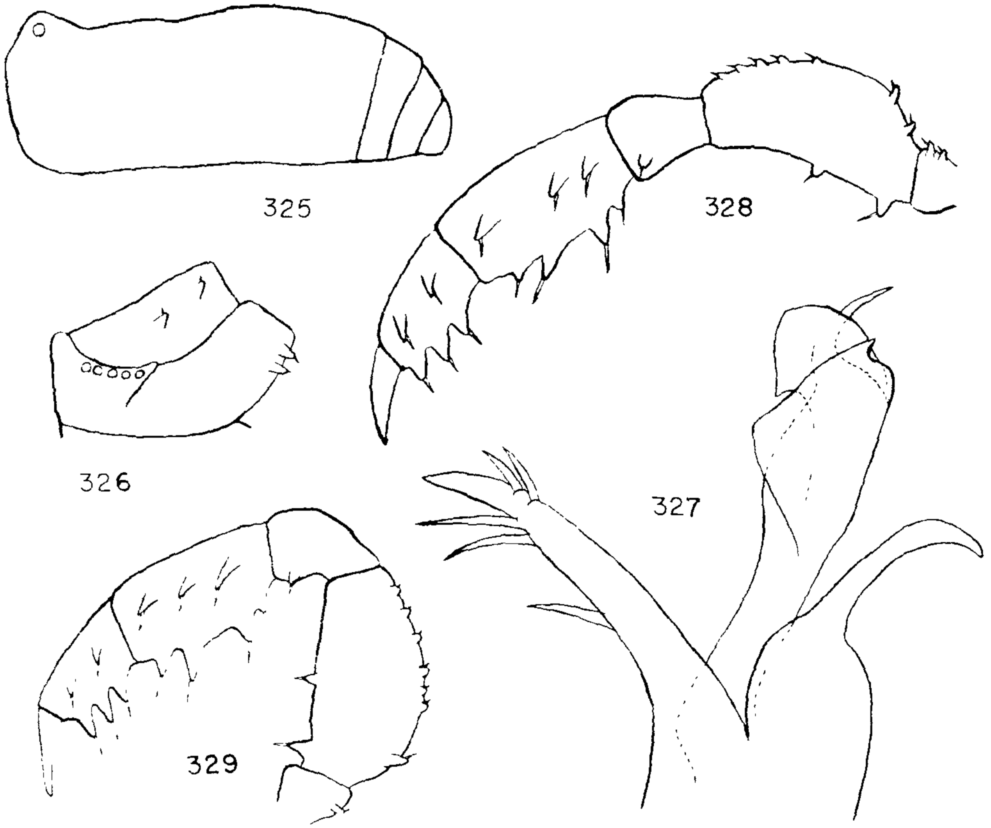
Types. Holotype male, Onomalutu Dam, Marlborough, December 26, 1946, S. M. Mulholland (D.M.2/407). Allotype female, same data (D.M.2/408); Paratypes: same data, 3 ♀, 6 immature (C.M.A. 309, D.M.2/409).

Nuncia (Micronuncia) contrita n.sp.

Figs. 325–329

Male

Colour. Scute pale yellowish-brown with faint reticulate markings on the anterior surface of the carapace and with an irregular black band extending down each



Figs. 325-329 *Nuncia (Micronuncia) roeweri contrita* n.s.sp.
Fig. 325 Lateral view of body, Fig. 326 Coxae 1 and 2 of male; Fig. 327 Male genitalia;
Fig. 328 Pro-lateral surface male pedipalp; Fig. 329 Pro-lateral surface female pedipalp.

lateral margin. Free tergites heavily shaded with black. Chelicerae and pedipalps uniform pale-brown.

Body. Scute and free tergites smooth. Eyemound evenly rounded, wider at the base than it is high in the ratio of 5:4. The scutal groove is very shallow and barely discernable. Maxillary lobes of coxae 2 as in Fig. 326, with five rounded granules along the anterior margin.

Genitalia. The apical portion of the aedeagus is curved, slender and spinous, combs not pectinate below, enclosed by broad flattened lateral plates as shown in Fig. 327. Superior setae smaller than inferior, two superior, three inferior

Chelicerae. Both sgements smooth. Basal segment with a shallow proximo-dorsal furrow.

Pedipalps (Fig. 328). Two small tubercles present on the dorsal surface of trochanter. Femur with two small dentiform tubercles on the proximal half of the dorsal surface, low rounded tubercles on anterior surface. There is a small rounded tubercle on the proximo-ventral and mid-ventral surfaces. Tibia with two spiniform tubercles on the retro-ventral surface as well as two smaller tubercles, one on the proximal, and one on the distal surface, and pro-ventral surface with three spiniform tubercles.

Pro-ventral margin of tarsus with two, retro-ventral margin with three spiniform tubercles.

Legs. Coxae as shown in Fig. 326, Femora 1–4 with small granules on the ventral surface. Tarsal formula 3.5.4.4.

Measurements

		Scute	Length 1.63		Width 1.41			
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.44	0.22	0.62	0.26	0.40	0.35	0.40	2.69
Leg 2 ..	0.70	0.23	0.75	0.40	0.66	0.70	0.75	4.19
Leg 3 ..	0.48	0.20	0.48	0.26	0.35	0.26	0.40	2.43
Leg 4 ..	0.84	0.23	0.84	0.31	0.70	0.84	0.57	4.33
Pedipalp ..		0.20	0.62	0.26	0.53		0.26	1.87
Chelicera ..	Basal	0.62	Second	0.75				1.37

Female

Similar to male in structure but lacking granules on the maxillary lobes and tubercles on pedipalps relatively stronger as shown in Fig. 329.

Measurements

		Scute	Length 1.58		Width 1.54			
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.31	0.20	0.62	0.26	0.31	0.35	0.48	2.53
Leg 2 ..	0.62	0.22	0.63	0.44	0.66	0 66	0.66	3.89
Leg 3 ..	0.53	0.20	0.53	0.26	0.44	0.31	0.44	2.71
Leg 4 ..	0.70	0.26	0.75	0.44	0.70	0.70	0.53	4.08
Pedipalp ..		0.20	0.53	0.22	0.44		0.31	1.70
Chelicera ..	Basal	0.53	Second	0.62				1.15

Types. Holotype male, Opouawa Gully, South Wairarapa, April 5, 1947, R. R. Forster (D M.2/385); Allotype female, same data (C.M.2/386); Paratypes: same data, 3 ♂, 5 ♀ (D.M.2/387, C.M.A. 291); Turanganui River, Wairarapa, June, 1949, A. C. O'Connor, 1 ♂, 6 ♀ (C.M.A. 296); Mangarei, Wairarapa, September 28, 1944, C. L. Wilton, 1 ♂ (D.M.2/339); Mangarei, October 20, 1943, C. L. Wilton, 1 ♀ (D.M.2/388); Mangarei, July 3, 1947, C. L. Wilton, 2 ♂, 2 ♀ (D.M.2/392).

Records. Stokes Valley, Wellington, January 10, 1948, R. K. Dell, 2 ♂, 1 ♀ (D.M. 2/390); Rimutuka Summit, June 14, 1947, R. K. Dell, 2 ♂, 1 ♀ (D.M.2/391); Kapiti Island, May, 1947, R. R. Forster, 2 ♂, 2 ♀ (C.M.A. 292); Feilding, December 26, 1948, R. R. Forster, 2 ♂ (C.M.A. 293); Aorangi, Feilding, August 22, 1948, R. R. Forster, 1 ♀, 1 imm. (C.M.A. 295); Totara Reserve, Manawatu, August 21, 1948, R. R. Forster, 3 ♀ (C.M.A. 294).

Nuncia (Micronuncia) alpha n.sp.

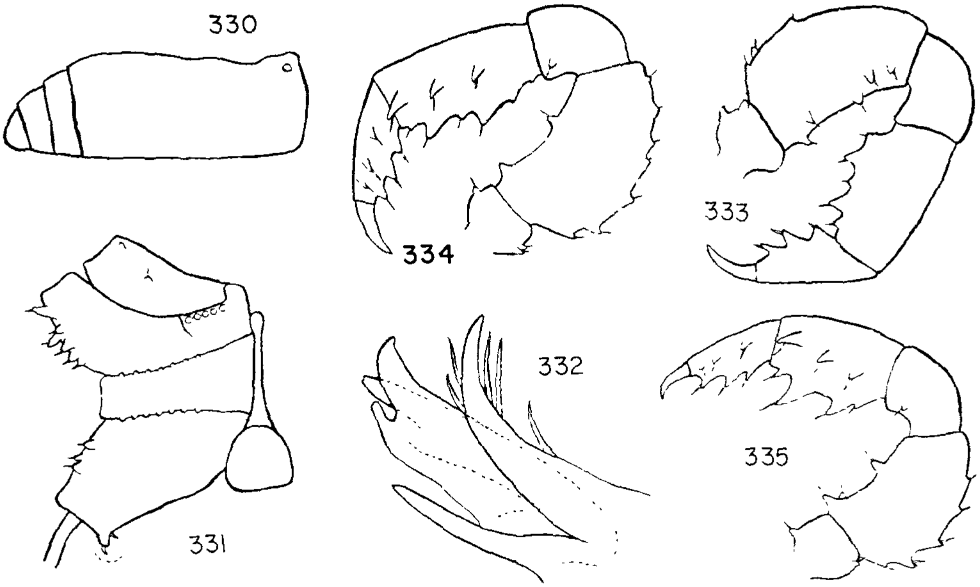
Figs. 330–335

Male

Colour. Ground colour pale orange-brown, with well defined black reticulate markings on the anterior portion of the carapace and a black patch on each side of the scute, median surface with light black shading. Dorsal surfaces of chelicerae and pedipalps with black reticulate markings.

Body. Scute and free tergites smooth. Eyemound somewhat flattened apically, sloping steeply up from the anterior margin of the carapace (Fig. 330). Scutal groove shallow. Maxillary lobes with five granules along the anterior margin (Fig. 331).

Genitalia. Aedeagus enclosed by a sheath without combs but with short lateral



FIGS. 330-335 *Nuncia (Micronuncia) alpha* n.sp.
Fig. 330 Lateral view of body; Fig. 331 Coxal region of male; Fig. 332 Male genitalia; Fig. 333 Retro-lateral surface male pedipalp; Fig. 334 Pro-lateral surface male pedipalp; Fig. 335 Pro-lateral surface female pedipalp.

lobes at about two-thirds of its length. Setae are long and slender proximal inferior seta widely separated from the distal pair (Fig. 332).

Chelicerae. Basal segment with a shallow proximo-dorsal groove and smoewhat constricted proximally. Both segments smooth.

Pedipalps (Figs. 333, 334). Trochanter with two small dorsal and one ventral tubercles. Femur with from 7–8 small dentiform tubercles along the dorsal surface and two pairs of small conical tubercles on the ventral surface, one pair proximal, second at about two-thirds. Retro-ventral surface of tibia with two strong spinous tubercles spaced between three small, more rounded tubercles. Pro-ventral surface of tibia and both pro- and retro-ventral surface of tarsus with three spinous tubercles.

Legs. Coxae as shown in Fig. 331. There are two small tubercles on the ventral surface of coxa 1, a group of conical tubercles on the retro-lateral surface of coxa 2 and 3–4 small rounded tubercles on the pro-ventral surface of coxa 4. Tarsal formula 3.6.4.4.

Measurements

Scute Length 2.11 Width 1.85

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.44	0.22	0.84	0.40	0.53	0.53	0.48	3.44
Leg 2 ..	0.84	0.26	1.01	0.44	0.84	0.75	0.70	4.84
Leg 3 ..	0.66	0.23	0.53	0.31	0.53	0.57	0.53	3.39
Leg 4 ..	0.88	0.31	1.01	0.53	0.88	1.10	0.62	5.33
Pedipalp ..		0.19	0.88	0.31	0.66		0.40	2.44
Chelicera ..	Basal	0.70	Second	0.84				1.54

Female

Scute darker than male. Maxillary lobes smooth. Pedipalp of similar structure to male, tubercles on retro-ventral margin of tibia relatively stronger (Fig. 335).

Measurements

	Scute	Length 1.89		Width 1.72				
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.44	0.18	0.70	0.31	0.48	0.44	0.44	2.99
Leg 2 ..	0.84	0.22	0.88	0.44	0.70	0.70	0.70	4.48
Leg 3 ..	0.57	0.21	0.57	0.31	0.53	0.48	0.48	3.15
Leg 4 ..	0.79	0.26	0.88	0.48	0.84	1.06	0.66	4.97
Pedipalps		0.18	0.70	0.70	0.31	0.48	0.31	2.68
Chelicera ..	Basal	0.53	Second	0.75				1.28

Types. Holotype male, Silverhope, Hunterville, Hawkes Bay, May, 1951, R. J. Ramsay (D.M.2/393), Allotype female, same data (D.M.2/394); Paratypes: same data, 7 ♂, 5 ♀ (C.M.A. 297).

Records. Norsewood, Hawkes Bay, January 27, 1948, P. J. Culliford, 2 ♂, 2 ♀ 2, immature (D.M.2/405); Dannevirke, April 12, 1943, R. R. Forster, 1 ♀ (D.M.2/403); Shannon Heights, A. C. O'Connor, 1 ♀ (C.M.A. 305); Pahiatua Track, 1,100 feet, August 23, 1951, A. C. O'Connor, 2 ♂ (C.M.A. 911); Vinegar Hill Reserve, near Taihape, December 12, 1948, R. R. Forster, 1 ♂ (C.M.A. 304); Raetihi, December 22, 1948, R. R. Forster, 1 ♀ (C.M.A. 300); Chateau Tongariro, December 20, 1948, R. R. Forster, 1 ♂, 1 ♀ (C.M.A. 302); Desert Road, Waiouru, March 24, 1948, J. T. Salmon, 2 ♂ (D.M.2/395); Gordon Park, Wanganui, December 28, 1948, J. M. Moreland, 1 ♀ (C.M.A. 913); Raglan, December 13, 1947, A. J. Healy, 2 ♂, 2 ♀ (D.M.2/396); Kekerangu, December 18, 1946, A. J. Healy, 1 ♀ (D.M.2/398); Upper Rangitikei, May 18, 1948, J. Ramsay, 1 ♀ (D.M.2/397); Marapapa River, December 4, 1947, A. J. Healy, 1 ♂, 1 ♀ (D.M.2/402); Hurleyville, Patea, January 10, 1950, D. Hurley, 2 ♀, 4 imm. (C.M.A. 301); Valley behind Te Hope, Coromandel Peninsula, January 3, 1951, T. E. Woodward, 1 ♂ (C.M.A. 303); Te Aroha, May 3, 1946, J. T. Salmon, 3 ♂, 1 ♀ (D.M.2/404), West side of Tararuas, June 4, 1948, R. K. Dell, 4 ♂ (D.M.2/399); Rahui Road, Otaki, A. C. O'Connor, 2 ♀, 1 imm. (C.M.A. 298); Rimutuka District, November 5, 1946, J. T. Salmon, 2 ♀ (D.M.2/914); Opouawa Gully, South Wairarapa, April 5, 1947, R. R. Forster, 1 ♀ (D.M.2/406); Mount Ross, South Wairarapa, April 5, 1947, R. R. Forster, 1 ♂ (D.M.2/913); Mangarei, Wairarapa, July 23, 1945, C. L. Wilton, 1 ♂ (D.M.2/917).

Genus *PSALENOBA* Roewer 1931.

1931 *Psalenoba* Roewer Zeits.f.wiss.zool. 138(1), p.159.

Eyemound low, without tubercles. Groove absent behind the anterior margin of the carapace. Scute and free tergites smooth. Legs unarmed; calcaneus of legs 1 and 2 much shorter than astragalus. Tarsal formula 3.5.4.4. Distitarsi of leg 1, two and leg 2, three-segmented. Side branches of claws 3 and 4 much weaker and shorter than the median prong.

Genotype (monotypy) *Psalenoba nunciaeformis* Roewer 1931.

Psalenoba nunciaeformis Roewer 1931.

1931 *Psalenoba nunciaeformis* Roewer Zeit.f.wiss.zool.138 (1), p.160.

Length of body 3.00 mm.; Leg 1, 3.00; Leg 2, 6.00; Leg 3, 3.5; Leg 4, 4.5.

In his specific description Roewer relies on the figures reproduced therein and supplies the following in amplification:—Surface of scute and free tergites smooth but dull, without spines or tubercles. Chelicerae small and completely unarmed. Femora of legs 1–4 with small scattered tubercles. Tarsal formula 3.5.4.4.

Colour of body dull rusty-yellow. Scute mottled with dark-brown. Legs and chelicerae rusty-yellow, with darker bands. Pedipalps uniform rusty-yellow.

Types. 1 male, 1 female. New Zealand (precise locality not known), Roewer Collection No. 1282/24. Senckenburg Museum, Bremen.

Remarks. The description and figures given for this species are insufficient for recognition and the types are not available for examination. A detailed examination will probably show that this species should be placed into *Nuncia* and it is quite possible that it will prove to be identical with one of the species described as new in the present paper.

Genus *NEONUNCIA* Roewer 1915

1909 *Triaenonyx* (Part), Hogg, Subantarct.Is.N.Zeal. p.178.
1915 *Neonuncia* Roewer, Arch. naturg. 80A (12), p.106.
1923 *Neonuncia* Roewer, Die Weberknechte der Erde, p.604.
1931 *Nuncia* (Part) Roewer, Zeits.f.zool.138 (1), p.152.
1942 *Nuncia* (Part), Roewer. Ver. Deuts. Kol. Ubers.Mus.Brem. 3 (3), p.278.

Eyemound, rising directly from the anterior margin of the carapace, smooth and rounded. Scute including the anterior margin of the carapace smooth, without pustules or tubercles. Tergal areas not defined. Legs unarmed, calcaneus much shorter than astragalus, calcaneus not notched. Tarsal formula 3.6–9.4.4. Chelicerae of male with a strong boss on the proximo-dorsal surface of the basal segment. Bifid tubercle present on the proximo-ventral surface of the femur of the pedipalp, stronger in male. Male dimorphism not recorded.

Genotype (s.d.) *Triaenonyx enderbei* Hogg 1909

Roewer (1914) placed two species (*enderbei* and *tuberculata*) in his genus *Neonuncia*, which he separated from *Nuncia* mainly on the basis of tarsus 1 being four-segmented instead of three-segmented as in *Nuncia*. I have designated *Neonuncia enderbyi* (Hogg) as the Type Species. Roewer accepted Hogg's (1909) record of the tarsal count for *enderbyi* as 4.10.5.5. but my re-examination of the type material shows that he had included the calcaneus of the metatarsus in this figure which therefore should read 3.9.4.4. It would not be possible to maintain Roewer's genus on the basis of this character, but however two important characters were overlooked by Hogg, namely the bifid tubercle on the proximo-ventral surface of the femur of the pedipalp and the boss on the proximo-dorsal surface of the basal segment of the chelicera. It is necessary to separate this group of species from *Nuncia* and so *Neonuncia* is retained with a somewhat different diagnosis. *Neonuncia tuberculata* Roewer will probably on further examination prove to be a species of the Australian genus *Nunciella* Roewer, which is closely related to the N.Z. genus.

Key to the males of Neonuncia

1. Eyemound directed forward 2
   Eyemound evenly rounded 3
2. Clavate tubercle on proximo-ventral surface of pedipalp femur with small tubercle on anterior surface .... *enderbyi* (Hogg)
   Clavate tubercle on proximo-ventral surface of pedipalp femur without secondary tubercle .... *blacki* n.sp.

3. Two strong tubercles on proximo-ventral surface of pedipalp femur, proximal clavate, distal spinous .... *opaca* (Roewer)
Single clavate tubercle on proximo-ventral surface of pedipalp femur........... .... *campbelli* n.sp.

Neonuncia enderbyi (Hogg 1909)

1909 *Triaenonyx enderbei* Hogg, Sub-Antarct. Is. N.Z., 1. p.178.
1914 *Neonuncia enderbei* (Hogg), Roewer, Arch. Naturg. 80A,(12), p.106.
1923 *Neonuncia enderbei* (Hogg), Roewer, Die Weberknechte der Erde, p.605.
1942 *Nuncia insulana* Roewer. Ver.Deuts.Kol.Ubers.Mus.Bremen. 3 (3), p.278.

Figs. 336–340

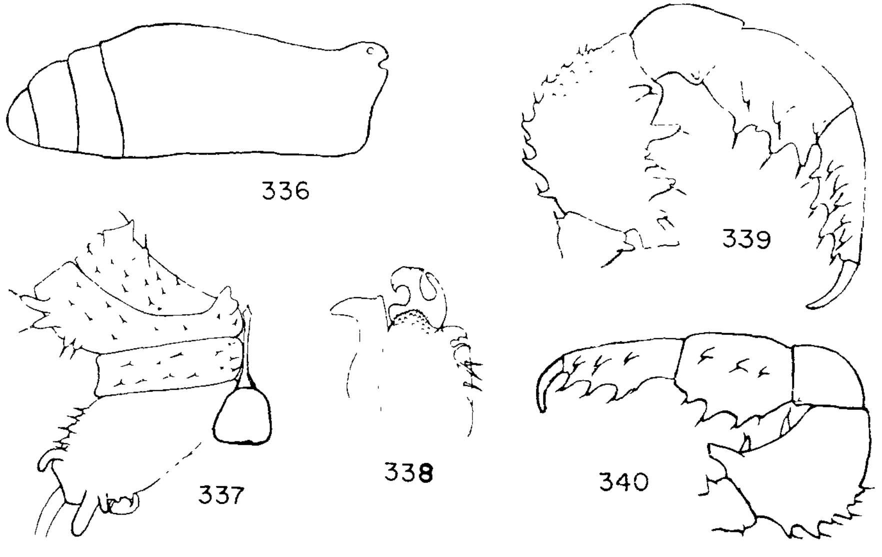
Male

Colour. The ground colour of the scute and free tergites is orange-brown but is heavily shaded with black. Sternites blackish, each with a transverse row of pale yellow spots. Ventral surfaces of coxae and dorsal surfaces of chelicerae with black reticulate markings. Legs pale yellow with irregular black markings.

Body. Scute, free tergites and sternites smooth. The eyemound is low, twice as wide as high, evenly rounded apically and projecting forward to form an anterior lobe (Fig. 336). There is a projection present on the anterior margin of the carapace at the outer margin of each chelicerae which abuts on to the proximo-dorsal knobs of the chelicerae. There is no scutal groove present. The maxillary lobes of coxae 2 are shown in Fig. 337.

Genitalia. As in Fig. 338. The distal portion is flattened and bi-lobed.

Chelicerae. Basal segment with a rounded knob on the proximal retro-dorsal surface and a further smaller swelling on the pro-dorsal surface at one third of its length. Second segment with a few small tubercles on the dorsal surface.



FIGS. 336-340 *Neonuncia enderbyi* (Hogg)
Fig. 336 Lateral view of body; Fig. 337 Coxal region of male; Fig. 338 Male genitalia; Fig. 339 Pro-lateral surface male pedipalp; Fig. 340 Pro-lateral surface female pedipalp.

Pedipalps (Fig. 339). Trochanter with a small rounded dorsal and a more conical ventral tubercle. The femur is stout, with a number of small dentiform tubercles on the dorsal surface and a strong obliquely clavate proximo-ventral tubercle which bears a smaller tubercle on the anterior basal surface and is followed by two strong spinous tubercles between which are from 2–3 smaller tubercles. There is a strong tubercle on the sub-distal pro-lateral surfaces of the femur and patella. Tibia with three strong spiniform tubercles on both pro- and retro-ventral surfaces. Tarsus with five pro- and four retro-ventral tubercles.

Legs. There is a broad, apically flattened tubercle on the disto-ventral surface of coxa 1 and a smaller spinous tubercle median in position. There are two digitiform tubercles in addition to a number of smaller tubercles on the distal retro-lateral surface of coxa 2 and one on both the distal surfaces of both pro- and retro-lateral surface of coxa 4, pro-lateral tubercle is curved (Fig. 337). Tarsal formula 3.9.4.4.

Measurements

Scute Length 3.70 Width 3.30

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.92	0.44	1.50	0.62	1.10	1.32	0.84	6.74
Leg 2 ..	1.40	0.48	1.89	0.92	1.50	1.72	1.89	9.80
Leg 3 ..	1.14	0.44	1.06	0.44	1.01	1.28	0.92	6.29
Leg 4 ..	1.50	0.57	1.80	0.88	1.50	2.02	1.06	9.33
Pedipalp ..		0.53	1.58	0.75	1.14		1.10	5.10
Chelicera ..	Basal	1.14	Second	1.54				2.68

Female. The shading on the scute is usually in the form of broken transverse bands which alternate with pale yellow-brown areas. There is no process on the proximo-dorsal surface of the chelicerae and the processes from the anterior margin of the carapace are smaller than in male. The pedipalps are smaller than in male and are provided with tubercles as shown in Fig. 339. Tarsal formula 3.7–9.4.4.

Measurements

Scute Length 3.95 Width 3.56

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.92	0.48	1.63	0.70	1.54	1.98	1.19	8.44
Leg 2 ..	1.54	0.53	2.42	0.88	2.20	2.60	2.86	13.03
Leg 3 ..	1.28	0.62	1.76	0.75	1.41	1.89	1.45	9.16
Leg 4 ..	1.76	0.62	2.24	0.79	1.98	2.82	1.67	11.88
Pedipalp ..		0.53	1.45	0.84	1.06		1.06	4.94
Chelicera ..	Basal	1.06	Second	1.72				2.78

Types. Holotype male, Enderby Is., Otago Museum, Dunedin.

Records. Enderby Island, 1923, coll. ??, 1 ♀ (C.M.A. 939); Ocean Island, Auckland Island, under fallen branches, Late April, 1944, E. G. Turbott, 1 ♂, 1 ♀ (Auckland Museum); Disappointment Island, Auckland Islands, December 9, 1944, E. G. Turbott, 1 ♂ (Auckland Museum), Campbell Is. (Roewer).

Remarks. This species was first placed by Hogg into the genus *Triaenonyx* but was subsequently transferred by Roewer to a new genus *Neonuncia. Nuncia insulana,* Roewer, is based on a single female collected from Campbell Island and appears to be synonymous with *enderbyi.* I have altered Hogg's spelling of the specific name "enderbei" to enderbyi in conformity with the name of the island from which it is derived.

Neonuncia eastoni n.sp.

Figs. 341–342

Male

Colour. Ground colour pale yellow, with black reticulate markings on the carapace and greyish-black shading on the tergal region and the free tergites. Chelicerae and pedipalps with black reticulate markings.

Body. The scute and eyemound as described for *opaca.*

Genitalia. The aedeagus (Fig. 341) has the general appearance of *enderbyi.* The ventral plates are provided with three short stout, sub-equal setae, one superior, two inferior.

Chelicerae. These are typical, with a small rounded boss on the outer proximo-dorsal surface of the basal segments and a few small tubercles on the dorsal surface of the second segment.

Pedipalps (Fig. 347). Trochanter with a small dorsal tubercle. The femur is provided with six tubercles on the dorsal surface, three dentiform on the proximal half and three smaller rounded on the distal half of the segment. There is a strong clavate, posteriorly directed tubercle on the proximo-ventral surface which bears a small rounded tubercle near the base on the anterior surface. Two further strong conical tubercles are present on the ventral surface, one median, and one distal pro-lateral in position. Tibia with three spinous tubercles on both pro- and retro-ventral surfaces. Tibia, with a series of six small tubercles along the pro-ventral and three spinous tubercles on retro-ventral surface.

Legs. As in *opaca.* Tarsal formula 3.7.4.4.

Measurements.

Scute Length 2.64 Width 2.42

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.92	0.26	1.14	0.48	0.88	1.06	0.84	5.58
Leg 2 ..	1.14	0.35	1.41	0.62	1.19	1.32	1.32	7.35
Leg 3 ..	0.92	0.36	0.88	0.44	0.44	0.97	0.66	4.67
Leg 4 ..	1.10	0.40	1.32	0.53	1.01	1.63	0.88	6.87
Pedipalp ..		0.31	1.19	0.48	0.88		0.75	3.61
Chelicera ..	Basal	1.06	Second	1.14				2.20

Type. Holotype male, Stony Peak, Auckland Island, April 16, 1945, M. G. Easton, (C.M.A. 935).

Remarks. This species is readily separated from *enderbyi* by its smaller size and rounded eyemound. It appears to be more closely related to *opaca* from which it is readily separated by the structure of the pedipalps and the different form of the male genitalia.

Neonuncia opaca (Roewer 1931)

1931 *Nuncia opaca* Roewer, Zeits f.zool., 138, (1), p.152.

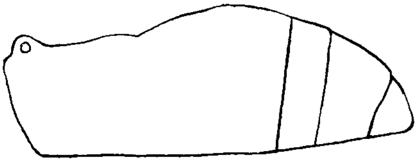
Figs. 345–346

Male

Colour. As described for *enderbyi.*

Body. The eyemound is evenly rounded. Scute and free tergites smooth. The scutal groove is distinct (Fig. 345). Maxillary lobes without secondary processes.

Genitalia. Unfortunately the genitalia of the only specimen available was accidentally destroyed during preparation.



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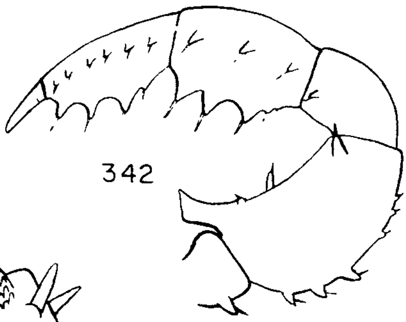

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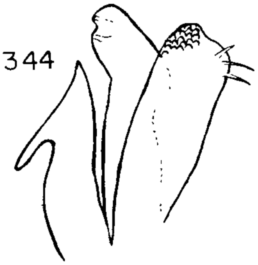

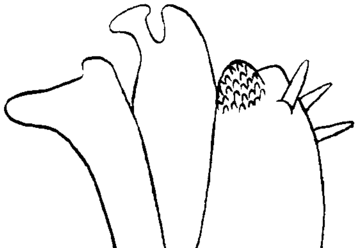

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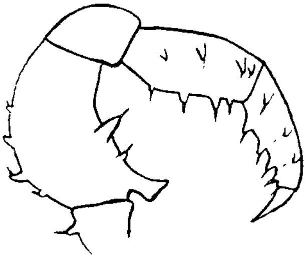

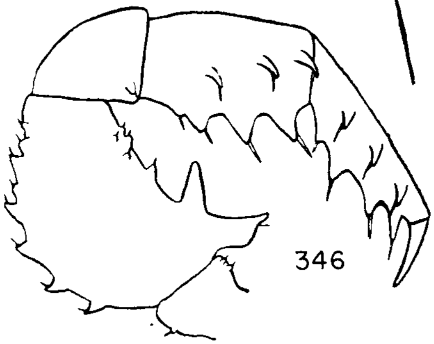

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Figs. 341-342 *Neonuncia eastoni* n.sp.
Fig. 341 Male genitalia; Fig. 342 Pro-lateral surface male pedipalp.

Figs. 343-344 *Neonuncia campbelli* n.sp.
Fig. 343 Pro-lateral surface male pedipalp; Fig. 344 Male genitalia.

Figs. 345-346 *Neonuncia opaca* (Roewer)
Fig. 345 Lateral view of body; Fig. 346 Pro-lateral surface male pedipalp.

Chelicerae. Normal, with a boss on the proximal surface of the basal segment.

Pedipalps. As shown in Fig. 346. There are eight tubercles on the dorsal surface of the femur, proximal four dentiform, distal rounded. Two strong proximo-ventral tubercles, posterior clavate, anterior spinous, followed by five small rounded tubercles. Tibia and tarsus with three spinous tubercles on both pro- and retro-ventral surfaces.

Legs. As in *enderbyi*. Tarsal formula 3.9.4.4.

Measurements		Scute	Length	2.43	Width	2.32		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.75	0.26	0.92	0.53	0.79	0.92	0.66	4.83
Leg 2 ..	1.10	0.26	1.36	0.62	1.14	1.23	1.28	6.99
Leg 3 ..	0.92	0.26	0.92	0.40	0.88	1.06	0.75	5.19
Leg 4 ..	1.06	0.35	1.41	0.57	1.14	1.58	0.88	3.56
Pedipalp ..		0.35	1.01	0.62	0.70		0.88	3.56
Chelicera ..	Basal	0.84	Second	1.10				1.94

Type. Pitt Is., Chathams, 3 specimens (British Museum); Akaroa, 1 ♂, 1 ♀ (Roewer Collection, Bremen Museum, No. 1251/16).

Record. Mangarei Island, Summit (737 feet), Chatham Islands, January 7, 1924, G. Archey, 1 ♂ (C.M.A. 62).

Remarks. Roewer described this species from 3 specimens held in the British Museum collected from Pitt Is., Chathams, and records a male and a female from Akaroa. Although it is possible that this species occurs on Banks Peninsula it has not been collected since. It is certain that many of the species recorded from Akaroa by Roewer were in fact collected from other parts of New Zealand and Roewer's material of this species could well have been collected from the Chatham Is.

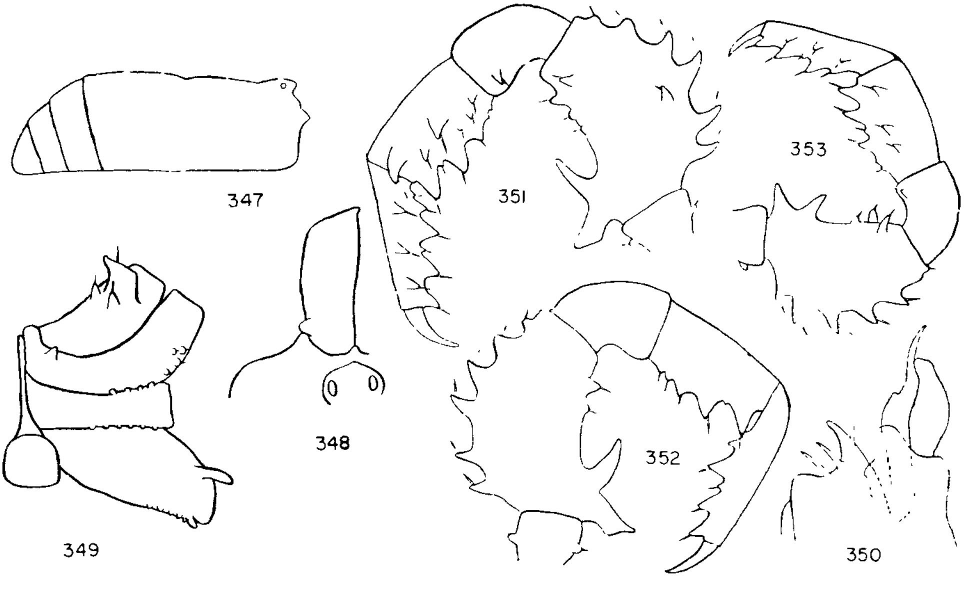
Neonuncia blacki n.sp.

Figs. 347–353

Male

Colour. The general colour of the scute and free tergites is pale yellow-brown with black reticulate markings on the anterior surface of the carapace and dark patches on the tergal region which break up posteriorly and extend back over the free tergites. The sternites are reddish-brown. The ventral surfaces of the coxae of the legs, the dorsal and lateral surfaces of the chelicerae and pedipalps are covered with black reticulate markings.

Body. Scute and free tergites smooth. The eyemound is low and projects forward slightly as shown in Fig. 347. There is a process on the anterior margin of the carapace at the retro-lateral margin of each chelicera which abuts on to the cheliceral processes (Fig. 349). The scutal groove is shallow. The tergal region is low, without



FIGS. 347-353 *Neonuncia blacki* n.sp.

Fig. 347 Lateral view of body; Fig. 348 Dorsal view anterior portion carapace and chelicera; Fig. 349 Coxal region of male; Fig. 350 Male genitalia; Fig. 351 Pro-lateral surface male pedipalp; Fig. 352 Retro-lateral surface male pedipalp; Fig. 353 Pro-lateral surface female pedipalp.

transverse grooves. Maxillary lobes of coxae 2 with a sharply conical secondary process (Fig. 349).

Genitalia. As shown in Fig. 350. Aedeagus flattened, spiniform with a sheath which extends sub-distally. Ventral plates with three sub-equal setae, one superior, two inferior.

Chelicerae. With a rounded knob on the outer proximo-dorsal surface of the basal segment (Fig. 348).

Pedipalps (Figs. 351, 352). Trochanter with a small rounded tubercle on both dorsal and ventral surfaces. Femur with six tubercles along the dorsal surface, proximal four spinous, distal two more rounded. There are two strong conjoint tubercles on the proximo-ventral surface, proximal tubercle broadly clavate, distal spinous, and a further group of three small tubercles on the sub-distal surface. There is a small conical tubercle on the sub-distal pro-lateral surface of both the femur and the patella. Tibia with two strong spinous tubercles on the pro-ventral and three retro-ventral surfaces. Tarsus with three pro- and four retro-ventral spinous tubercles.

Legs. There is a strong broad apically flattened tubercle on the disto-ventral surface of coxa 1 and two small conical tubercles more proximal in postion. Coxa 4 with a strong digitate tubercle on the disto pro-lateral surface (Fig. 349). Tarsal formula 3.8–9.4.4.

Measurements

		Scute	Length	2.07	Width	1.80		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.57	0.26	0.88	0.44	0.70	0.88	0.62	4.35
Leg 2 ..	0.75	0.27	1.19	0.62	0.97	0.89	1.32	6.01
Leg 3 ..	0.79	0.22	0.70	0.40	0.66	0.75	0.66	4.18
Leg 4 ..	0.97	0.35	1.19	0.53	0.97	1.32	0.88	6.41
Pedipalp ..		0.31	0.97	0.53	0.62		0.84	3.27
Chelicera ..	Basal	0.62	Second	1.10				1.72

Female. The projections on the anterior margin of the carapace at the outer margin of the chelicerae are smaller than in male and the rounded swellings found on the proximo-dorsal surface of the basal segment of the chelicerae of the male are lacking. The maxillary lobes are smooth. The pedipalps are as shown in Fig. 348, two tubercles on the proximo-ventral surface of the femur both spinous, equal in size. Tarsal formula as in male.

Measurements

		Scute	Length	1.94	Width	2.02		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.53	0.20	0.66	0.48	0.66	0.84	0.57	3.94
Leg 2 ..	0.75	0.26	1.06	0.57	0.88	0.88	1.10	5.50
Leg 3 ..	0.66	0.22	0.53	0.44	0.66	0.70	0.57	3.78
Leg 4 ..	0.88	0.31	1.01	0.48	0.92	1.32	0.75	5.67
Pedipalp ..		0.20	0.84	0.47	0.48		0.66	2.65
Chelicera ..	Basal	0.66	Second	0.97				1.63

Types. Holotype male, Caswell Sound, April 18, 1949, R. R. Forster (C.M.A. 930); Allotype female, same data (C.M.A. 931); Paratypes: same data, 3 ♂, 1 ♀ (C.M.A. 932); same locality, March 22, 1949, R. K. Dell, 1 ♀ (D.M. 2/925); Stillwater Base, Caswell Sound, April 11, 1949, R. R. Forster, 1 ♂, 2 ♀, 1 imm. (C.M.A. 933); Upper Stillwater River, Caswell Sound, April 12, 1949, R. R. Forster, 3 ♀ (C.M.A. 934);

Rugged Burn Valley, West Te Anau 15–18/2/53, G. Ramsay (American Museum Natural History, New York).

Records. Harrison's Cove, Milford Sound, January 29, 1946, R. R. Forster, 1 ♀ (D.M.2/926).

I have named this distinctive species for Mr. A. Black who has done much to advance scientific knowledge of the Fiordland area in providing the use of his vessel the "Alert".

Genus *HEDWIGA* Roewer 1931.

1931 *Hedwiga* Roewer, Zeits. f. zool. 138, (1), p.174.

Eyemound with a single median spine spaced one quarter of its width from the anterior margin of the carapace. Anterior margin of the carapace without tubercles. Areas 3 and 4 with a median pair of small tubercles. Scute not pustulate. Posterior margin of the scute and free tergites smooth. Genital operculum smooth. Calcaneus of legs 1 and 2 relatively long but shorter than astragalus. Tarsal formula 7.18–21.4.4. Distitarsi 1, 2-jointed, distitarsi 2, 3-jointed. The side branches of claws of legs 3 and 4 much shorter and weaker than median branch. Aedeagus tubular, armed with numerous short spines. Sexual dimorphism pronounced in pedipalps. Male dimorphism present.

Genotype (monotypy) *Hedwiga manubriata* Roewer 1931.

The structure of the male pedipalps, although striking, may prove to be of less than generic importance if further species are found but the high tarsal count and structure of the penis, separates this genus from *Hendea* to which it is closely related.

Hedwiga manubriata Roewer 1931

1931 *Hedwiga manubriata* Roewer, Zeits, f. zool. 138, (1), p.174

Figs. 354–359

Male Form A

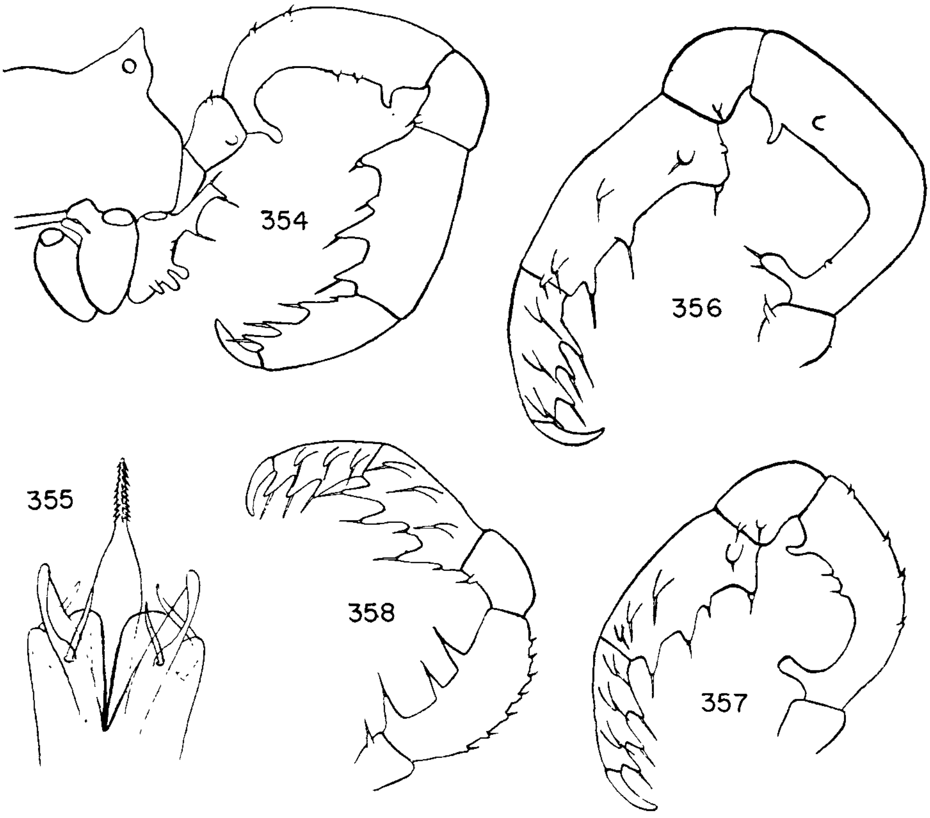
Colour. General colour orange-brown but scute, free tergites and sternites heavily shaded with black. Chelicerae and pedipalps with black reticulate markings.

Body. The eyemound is provided with a short, stout apical spine and is separated from the anterior margin of the carapace by a distance equal to one quarter of its width (Fig. 354). The scute is coriaceous. Scutal groove shallow, limited to the median surface. Tergal areas not separated by grooves, but areas indicated by four median pairs of small dentiform tubercles. Maxillary lobes of coxae 2 with a small secondary process.

Genitalia. The aedeagus is stout proximally but slender distally where it is provided with numerous small spines (Fig. 355). Ventral plates with a single seta on both superior and inferior surfaces, superior seta long and curved.

Chelicerae. Both segments are relatively long. Basal segment smooth. Second segment with two dentiform tubercles on the ventral surface, one proximal, one distal, and a number of similar tubercles on the dorsal surface.

Pedipalps Fig. 357). There is a small elongate tubercle on the ventral surface of the trochanter. The femur is slender, and bent at one-third of its length so that the distal two-thirds is at right angles to the proximal portion. Dorsal surface is smooth. An elongate, clubbed tubercle present on the proximo-ventral surface and a smaller



Figs. 354-358 *Hedwiga manubriata* Roewer

Fig. 354 Lateral view of anterior portion of body and pedipalp of "Form B" male; Fig. 355 Male genitalia; Fig. 356 Pro-lateral surface of "Form A" male pedipalp; Fig. 357 Pro-lateral surface "Form B" male pedipalp; Fig. 358 Pro-lateral surface female pedipalp.

more sharply pointed tubercle near the disto-ventral surface. Tibia with a rounded tubercle on the proximo-ventral surface and three more spinous tubercles on the distal half of the pro-ventral surface. The proximal surface of the retro-ventral margin is strongly swollen, with a small apical tubercle. Two normal spinous tubercles are present on the distal half of the retro-ventral margin. Tarsus with three spinous tubercles on both pro- and retro-ventral margins.

Legs. There is an elongate process on the distal pro-ventral surface of coxa 1 as shown in Fig. 354, which is equal in length to one half of the length of the coxal segment, and is followed by three smaller elongate tubercles. There is a strong flattened process on the distal retro-ventral surface of coxa 2, which rests on the lateral surface of the scute. There are three low tubercles on the proximal half of the ventral surface of femur 1. Tarsal formula 7.18–21.4.4.

Measurements

Scute Length 3.34 Width 3.08

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.88	0.44	2.20	0.88	1.76	2.55	1.58	10.29
Leg 2 ..	1.32	0.53	2.77	1.14	2.90	3.66	3.56	15.88
Leg 3 ..	1.32	0.62	2.64	0.88	1.98	2.64	1.54	11.62
Leg 4 ..	1.76	0.70	3.08	1.10	2.68	4.13	2.55	16.00
Pedipalp ..		0.66	2.95	0.84	1.72		1.14	7.31
Chelicerae	Basal	1.76	Second	2.02				3.78

Male Form B

This is similar to Form A in most characters but differs in the pedipalps. The femur is relatively shorter and more evenly curved, there are a few small tubercles on the dorsal surface and two similar tubercles on the ventral surface beyond the median surface (Figs. 354, 358). The maxillary lobes are smooth.

Measurements

Scute Length 2.82 Width 2.64

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.75	0.44	2.20	0.88	1.58	2.42	1.54	9.81
Leg 2 ..	1.32	0.48	3.30	1.10	2.86	3.30	3.08	15.44
Leg 3 ..	1.31	0.57	2.64	0.75	1.98	2.73	1.76	11.74
Leg 4 ..	1.58	0.62	3.08	1.10	2.64	3.92	2.42	15.36
Pedipalp ..		0.75	1.85	0.57	1.32		0.88	4.37
Chelicerae	Basal	1.32	Second	1.76				3.08

Female. The chelicerae are somewhat shorter than in male. The pedipalps are as shown in Fig. 359, the femur is normal in appearance, with a strong spinous tubercle on the proximo-ventral surface and two similar tubercles on the mid-ventral surface. Dorsal surface with a number of small dentiform tubercles. Retro-ventral margin of tibia with two small tubercles in addition to three strong spinous tubercles in pro-ventral margin of tibia and both ventral margins of tarsus, with three strong spinous tubercles. The tubercles on the ventral surface of the femur of leg 1 are more prominent than in male. Tarsal formula 7.16–20.4.4.

Measurements

Scute Length 2.77 Width 2.73

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.70	0.31	1.76	0.88	1.50	2.11	1.41	8.67
Leg 2 ..	0.92	0.44	3.08	0.88	2.42	3.52	3.34	14.60
Leg 3 ..	0.88	0.44	2.20	0.66	1.98	2.51	1.85	10.51
Leg 4 ..	1.23	0.53	3.12	1.01	2.29	3.74	1.85	13.77
Pedipalp ..		0.44	1.41	0.53	1.10		1.06	4.54
Chelicera ..	Basal	0.97	Second	1.28				1.25

Types. Holotype male (A), Akaroa? (Roewer collection in Bremen Museum, No. 1293/35).

Records. Stewart Island: Halfmoon Bay, March, 1949, O. Allan, 1 ♂ (B), 1 ♀ (C.M.A. 586); same locality, June 1950, O. Allan, 1 ♀ (C.M.A. 684); same locality, November 24, 1946, R. R. Forster, 1 ♂ (A), 1 ♀ (D.M.2/516); Lower slopes of Mount Rakeahua, January 30, 1949, E. W. Dawson, 1 ♂ (B) (C.M.A. 414); Raroa Reserve, October 30, 1948, R. K. Dell, 2 ♂ (1A, 1 B), 2 ♀ (D.M.2/512); Bravo, November 23, 1946, R. R. Forster, 3 ♂ (A), 2 ♀ (D.M.2/511), 2/519); Sealers Bay, Codfish Island, November 9, 1948, R. K. Dell, 2 ♂ (A) (D.M.2/513); Codfish Island, November 7, 1948, R. K. Dell, 2 ♀ (D.M.2/515); South Island: Bluff, January 27, 1949, R. R. Forster, 9 ♂ (6 A, 3 B), 3 ♀ (C.M.A. 416).

Remarks. The locality given by Roewer for the type specimen is undoubtedly erroneous. Dr. Roewer informs me that this species and a number of other species recorded from Akaroa (Roewer, 1931) were part of a collection given to him by the late E. Reimoser. The original source is not known. There is no doubt that this collection was made from a number of localities in the South Island and Stewart Island and possibly Australia (*e.g. Nunciella granulata*).

Genus *HENDEA* Roewer 1931

1920 *Monoxyomma* (Part), Hogg, Proc. Zool. Soc. London, p.44.
1931 *Hendea*, Roewer, Zeits.f.zool., 138 (1), p.173.
1932 *Monoxyomma*, Phillipps and Grimmett, Proc.Zool.Soc.London, p.737.

Eyemound separated from the anterior margin of the carapace, usually with a prominent apical spine. Anterior margin of the carapace without tubercles. Tergal areas usually with spinous tubercles prominent on area 3, sometimes small or absent. Posterior margin of the scute and free tergites without strong tubercles. Elongate tubercles present on the proximo-ventral surface of the femur on leg 1. Calcaneus much shorter than astragalus. Tarsal formula 5–6.12–21.4.4. Side branches of claws 3 and 4 much smaller and weaker than median.

Sexual dimorphism usually prominent; Pedipalps of males usually more robust, strong compound tubercle present on the basal segment of the chelicera. Male dimorphism not recorded.

Genotype (monotypy) *Monoxyomma hendei* Hogg 1920.

I have followed Roewer in separating the New Zealand forms from the Australian *Monoxyomma* although the main character used by Roewer (tarsal count) does not provide a valid character. However it would appear from the descriptions available of Australian forms and the collection of Australian Opiliones which are available to the author, that the Australian forms are characterised by a pair of strong spines, rather than a single spine, on area 3 of the scute and have a somewhat different form of pedipalp, and therefore the New Zealand forms should be separated from *Monoxyomma*.

It is unfortunate that the single specimen in existence of *H. hendei* has not been available for examination as no specimens collected from near the type locality agree with Hogg's description of his specimen. The bifid structure of the median spine of Area 2 has not been found in other species of the genus and does suggest that this structure may be due to malformation.

Key to the males of Hendea

1. Area 2 with a prominent single or bifid median spinous process................. 2
Area 2 without a median spinous process..............................*oconnori* n.sp.
2. Area 2 with a single median spinous process... 3
Area 2 with a prominent bifid median spinous process..............*hendei* (Hogg)
3. Distinct swelling present on the postero-lateral surfaces of the carapace......... 4
Not as above.. 7
4. Eyemound with a strong apical spinous process 5
Eyemound with a median apical pair of small tubercles.........*bucculenta* n.sp.
5. Apical spine on eyemound equal in size to process on Area 2.................... 6
Apical spine on eyemound much weaker than process on Area 2......*nelsonensis* n.sp.

6. Tarsus 1, 6-segmented; pair of spinous tubercles on proximo-ventral surface of pedipalp femur almost equal in size ....*phillippsi* n.sp....
Tarsus 1, 7-segmented; pair of tubercles on proximo-ventral surface of pedipalp femur, but retro-ventral strong, spinous, pro-ventral small, conical......*assimilis* n.sp.
7. Strong bifid tubercle present on the proximo-dorsal surface of the second segment of the chelicera.. 8
Not as above 10
8. Spinous process on Area 2 small, about equal in size to the ocular spine......... 9
Spinous process on Area 2 massive, equal in height to eyemound including the apical spine..*stiphra* n.sp.
9. Tarsal formula 6.15–17.4.4............................*myersi* (Phillipps and Grimmett)
Tarsal formula 7.18–21.4.4................................ *myersi cavernicola* n.s.sp.
10. Proximo-ventral surface of pedipalp femur with two small conical tubercles...11
Proximo-ventral surface of pedipalp femur with two strong spinous tubercles .... *fiordensis* n.sp.
11. Apical portion of aedeagus as in Fig. 387....................*myersi roeweri* n.s.sp.
Apical portion of aedeagus as in Fig. 374....................*myersi ochrea* n.s.sp.

Hendea hendei (Hogg 1920)

1920 *Monoxyomma hendei* (Hogg) Proc. Zool. Soc. London, p.44.
1931 *Hendea hendei* (Hogg), Roewer, Zeits., f. zool. 138, (1) p.173.

Male

Colour. Carapace yellow-brown, shaded with black-brown, chiefly at the sides. Tergal region and free tergites blackish. Chelicerae yellow-brown with faint reticulate markings. Pedipalps similar but reticulate markings stronger.

Body. Median area of carapace slightly convex, but without swollen areas on the postero-lateral surfaces. Surface with a ridge along the anterior margin but lacking spines or tubercles. Eyemound removed from the anterior margin of the carapace, somewhat conical, with a strong apical spine equal in height to the eyemound proper and curved slightly forward. Area 2 with a large bifid tubercle on the median surface. Areas 4 and 5 and free tergites each with a transverse row of small tubercles.

Chelicerae. Without strong tubercles.

Pedipalps. Two longitudinal rows of small tubercles present on the dorsal surface of the femur. Three spinous tubercles on the pro-ventral surfaces of tibia and tarsus.

Legs. Trochanter, femur, patella and tibia of all legs with rows of small warty tubercles, similar but smaller on the coxae.

Measurements. Length of body, 2.75; Width, 2.0; Leg 1, 6.75; Leg 2, 9.75; Leg 3, 7.0; Leg 4, 9.75; Pedipalp, 4.0; Chelicera, 2.0.

Type. Holotype male, Hende's Ferry, Central Westland, Coll. J. W. Hende in British Museum.

Remarks. Dr. Evans has examined the type specimen and has informed me that it probably is a male. The bifid tubercle on Area 2 is unique but apart from this structure it could well be identical with one of the forms described in the present paper from near the type locality. The absence of this species from material collected near the type locality does suggest that the specimen described above is abnormal but this matter will only be settled by close examination of the type specimen.

Hendea myersi (Phillipps and Grimmett 1932)

1932 *Monoxyomma myersi* Phillipps and Grimmett, Proc. Zool. Soc. Lond., p.736.

Figs. 360–366

Male

Colour. Ground colour of body yellowish-brown but heavily shaded with blackish-brown. Chelicerae and pedipalps with black reticulate markings.

Body. The eyemound is relatively low, with a short apical spine which is not equal to the height of the eyemound proper (Fig. 360). and is separated from the anterior margin of the carapace by a distance which is equal to one third of its diameter. There are two small spinous tubercles, behind each anterior corner of the carapace, situated on a low ridge which extends across the anterior margin of the carapace and down the lateral margins. Scutal groove shallow but clearly defined. Tergal areas defined by transverse rows of small rounded tubercles which are limited to the median surface on Areas 1–3. There is a small spinous tubercle on the median surface of Area 2 which is directed back and is equal in size to the eyemound spine. Free tergites and sternites each with a transverse row of low tubercles. Maxillary lobes of coxae 2 with a small accessory process.

Genitalia. The aedeagus is tubular and curved apically as shown in Fig. 362. The ventral plate is divided by a median suture. The superior seta is stout, much stronger than the three inferior setae (Fig. 361).

Chelicerae. Basal segment with two small disto-dorsal tubercles. There is a strong compound tubercle on the proximo-dorsal surface of the second segment as shown in Fig. 365, immediately followed by a further strong tubercle, distal surface with smaller tubercles.

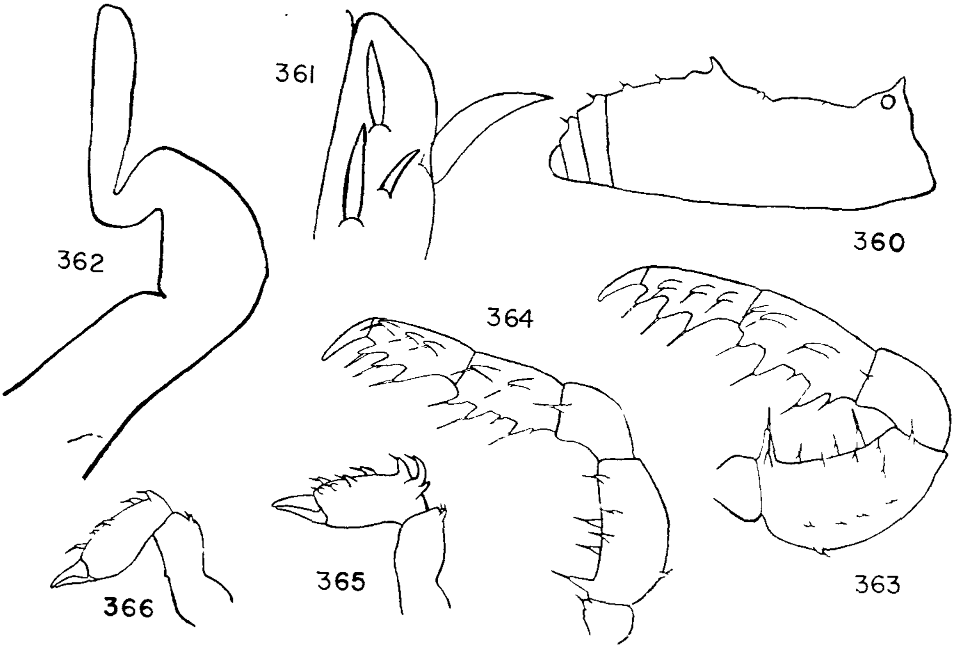
Pedipalps (Fig. 363). Trochanter smooth. There is a strong elongate, sub-conical tubercle on the proximo-ventral surface of the femur, flanked on pro-lateral margin by a similar but much smaller tubercle. A number of further small tubercles are present on both ventral and prolateral surfaces. Dorsal surface with a single dentiform tubercle at about one quarter of the length of the segment. Both pro- and retro-ventral margins of tibia and tarsus with three spiniform tubercles but proximal tubercle on the retro-ventral margin of tibia flanked on each side by a small tubercle.

Legs. All segments except tarsus granulate. Tarsal formula 6.15–17.4.4.

Measurements

		Scute	Length	3.08	Width	2.86		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.19	0.44	1.98	0.84	1.50	1.98	1.32	9.25
Leg 2 ..	1.76	0.57	2.90	1.01	2.46	3.30	2.77	14.77
Leg 3 ..	1.32	0.48	2.38	0.92	1.80	2.60	1.63	11.13
Leg 4 ..	1.58	0.58	2.77	1.06	2.33	3.34	2.16	13.82
Pedipalp ..		0.47	2.20	1.19	1.36		1.19	6.41
Chelicera ..	Basal	1.14	Second	1.54				2.68

Female. Similar in general structure to male. Maxillary lobes smooth. Pedipalps more slender but number and disposition of tubercles similar to male as shown in Fig. 364. Chelicerae as shown in Fig. 366, with a strong proximo-dorsal process on the second segment.



FIGS. 360-366 *Hendea myersi* Phillipps and Grimmett

Fig. 360 Lateral view of body; Fig. 361 Ventral plate of male genitalia; Fig. 362 Aedeagus of male genitalia; Fig. 363 Pro-lateral surface male pedipalp; Fig. 364 Pro-lateral view of female pedipalp; Fig. 365 Male chelicera; Fig. 366 Female chelicera.

Measurements

		Scute	Length	2.73	Width	2.77		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.92	0.35	1.54	0.62	1.32	1.63	1.10	7.48
Leg 2 ..	1.41	0.44	2.38	0.92	2.20	2.64	2.20	12.19
Leg 3 ..	1.10	0.38	1.55	0.75	1.41	1.98	1.32	8.49
Leg 4 ..	1.36	0.48	2.02	0.92	1.98	0.50	1.50	9.76
Pedipalp ..		0.44	1.32	0.66	1.10		0.72	4.24
Chelicera ..	Basal	0.79	Second	1.28				2.07

Types. Lectotype male, Khandallah, Wellington, date ? ? ? , R. E. R. Grimmett (D.M.2/498), Syntypes, 3 ♂, 11 ♀ (D.M.2/499, 2/446–7), same data.

Records

South Island. Pelorus Bridge, Marlborough, January 1949, A. C. O'Connor, 2 ♂, 1 ♀ (C.M.A. 406); *North Island.* Karori, Wellington, August 2, 1942, R. R. Forster, 3 ♂, 12 ♀ (D.M.2/454), Karori, June 10, 1942, R. R. Forster, 1 ♂, 4 ♀ (D.M.2/449); Johnson's Hill, Karori, March 23, 1946, R. R. Forster, 1 ♂, 3 ♀ (D.M.2/455); Wilton's Bush, Wellington, February 6, 1920, R. E. R. Grimmett, 2 ♂, 4 ♀ (D.M.2/442); Ngaio, Wellington, December 20, 1919, R. E. R. Grimmett, 1 ♀ (D.M.2/441); King George V Park, Wellington, May 21, 1950, R. R. Forster, 1 ♂, 2 ♀ (C.M.A. 405); Kapiti Island, December 20, 1942, M. Ross, 1 ♀ (D.M.2/453); Orongorongo, December 2, 1920, R. E. R. Grimmett, 6 ♂, 9 ♀ (D.M.2/450); Hector Track, Tararua Range, August 20, 1921, R. E. R. Grimmett, 1 ♂, 1 ♀ (D.M.2/435); West side of Tararua Range, near Levin, June 13, 1948, R. K. Dell, 2 ♂, 1 ♀ (D.M.

2/448); Tauhinui, Tararua Range, June 19, 1948, R. K. Dell, 2 ♂, 5 ♀ (D.M.2/504); West side of Rimutuka Range, June 13, 1948, R. K. Dell, 1 ♀ (D.M.2/502); Maori Bay, Porirua, date ? ? , R. E. R. Grimmett, 2 ♀ (D.M.2/451); Silverstream, September 4, 1924, R. E. R. Grimmett, 2 ♀ (D.M.2/434); Waikanae, January 3, 1948, R. R. Forster, 1 ♀ (D.M.2/505); Little Akatarawa, March 1, 1947, R. R. Forster, 1 ♂, 2 ♀ (D.M.2/445); Akatararua, January 2, 1943, R. R. Forster, 5 ♂, 5 ♀ (D.M.2/507); Levin, June 6, 1948, R. R. Forster, 1 ♀ (D.M.2/439); Mangahea, Manawatu, January 29, 1951, T. E. Woodward, 1 ♀ (C.M.A. 404); Mount Egmont, January 11, 1950, T. E. Woodward, 1 ♀ (C.M.A. 631); Pahiatua Track, 1,100 feet, August 23, 1951, A. C. O'Connor, 1 ♂ (C.M.A. 912); Williamson's Creek, Pirinoa, October, 1949, A. C. O'Connor, 1 ♀ (C.M.A. 351); Turanganui River, Wairarapa, June 1949, A. C. O'Connor, 1 ♂, 1 ♀ (C.M.A. 350).

Remarks. The type material of this species was included in a large collection of Opiliones presented by Mr. R. E. R. Grimmett to the Dominion Museum. This species is common in the Wellington district. It is interesting to note that it also occurs in the South Island at Pelorus Bridge.

Hendea myersi assimilis n.s.sp.

Figs. 367–372

Male

Colour. General colour dark-brown but with two pale yellowish-brown patches on the posterior margin of the carapace. Dorsal surfaces of chelicerae and pedipalps with black reticulate markings.

Body. Eyemound with a strong erect spinous process rising up in front of the eyes, equal in height to the eyemound proper (Fig. 367). Two small dentiform tubercles present behind each anterior corner of the carapace. Swelling present on postero-lateral surfaces of carapace. Scutal groove distinct. Tergal areas 1–5 and free tergites each with a transverse row of small shiny tubercles, Area 2 with a median spinous process, equal in size with the ocular process. Maxillary lobes of coxae 2 with a small rounded and shiny secondary process on the median surface.

Genitalia. Apical portion of the aedeagus as shown in Fig. 369. Median incision of ventral plate extends a little more than one-third of its length. Superior seta much stronger than inferior setae (Fig. 368).

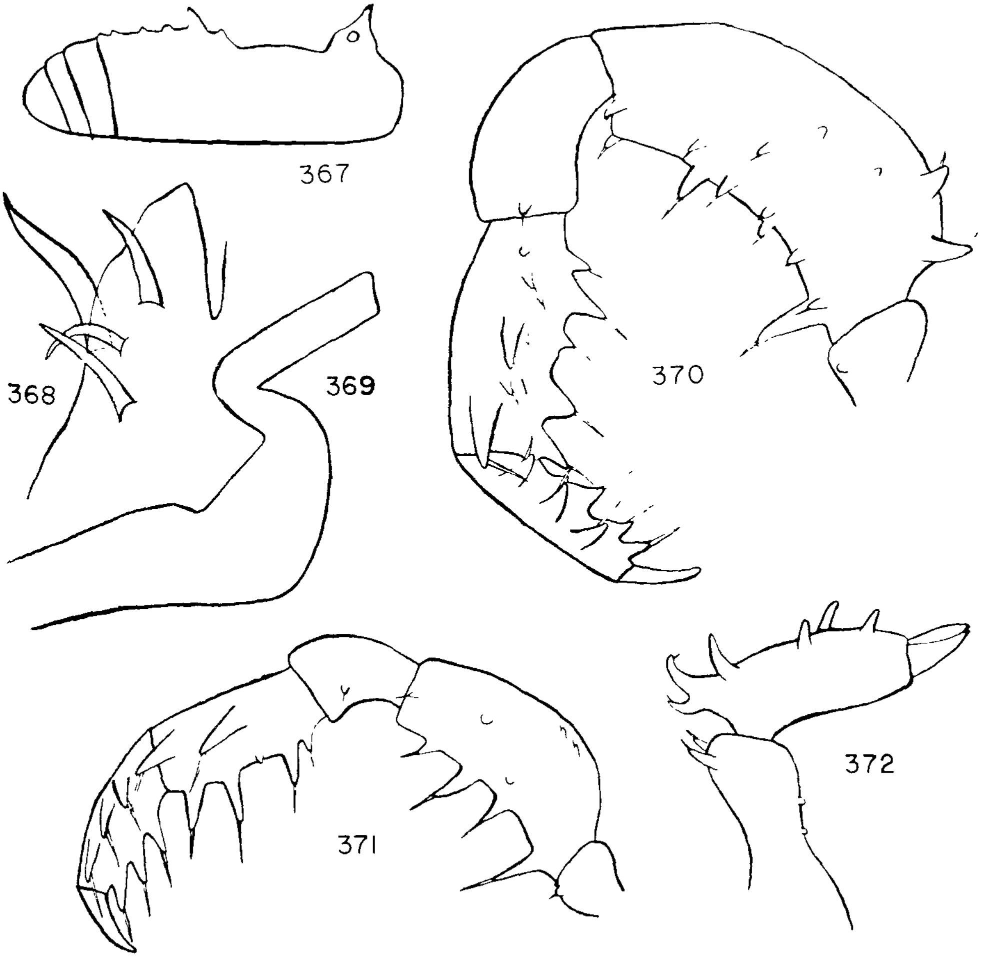
Chelicerae. There are two small pustules on the mid-ventral surface of the basal segment and two spinous tubercles on the disto-dorsal surface. There is a strong unevenly bifid tubercle on the proximo-dorsal surface of the second segment followed closely by a strong simple tubercle of comparable height and three further simple tubercles on the distal half of the dorsal surface (Fig. 372).

Pedipalps (Fig. 370). Trochanter with a small ventral tubercle. There are two spinous tubercles on the proximo-dorsal surface of the femur and a strong elongate spinous tubercle on the proximo-ventral surface with a number of smaller tubercles on the ventral and prolateral surfaces as shown in Fig. 370. Pro-ventral surface of tibia with two strong spinous tubercles and from 4–5 smaller tubercles, retro-ventral surface with five spinous tubercles of which the first and third are small. Tarsus with three strong spinous tubercles on both pro- and retro-ventral margins.

Legs. Sparsely granulate. Tarsal formula 7.18–20.4.4.

Measurements

Scute	Length	3.30	Width	2.95



Figs. 367-372 *Hendea myersi assimilis* n.s.sp.

Fig. 367 Lateral view of body; Fig. 368 Ventral plate of male genitalia; Fig. 369 Aedeagus; Fig. 370 Pro-lateral surface male pedipalp; Fig. 371 Pro-lateral surface female pedipalp; Fig. 372 Male chelicera.

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.32	0.44	2.20	0.84	1.76	2.42	1.41	10.39
Leg 2 ..	1.76	0.57	3.66	1.10	3.30	4.13	3.30	17.82
Leg 3 ..	1.36	0.53	2.86	1.06	1.98	3.08	1.67	12.54
Leg 4 ..	1.76	0.57	3.52	1.09	2.54	3.96	2.29	15.73
Pedipalp ..		0.53	2.24	1.10	1.89		1.14	6.90
Chelicerae	Basal	1.06	Second	1.72				2.78

Female. Differing only slightly in structure from the male. The tubercles on the carapace are reduced in size. The ocular process and median process of Area 2 are relatively longer. Maxillary lobes smooth. Pedipalp more slender, four spinous tubercles on the ventral surface of the femur of which the first three are strong and sub-equal in length, the second, fourth and fifth tubercles on the retro-ventral margin of the tibia are more slender (Fig. 371). Tubercles on the dorsal surface of the second segment of the chelicera reduced in size.

Measurements

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
		Scute	Length	2.55	Width	2.90		
Leg 1 ..	0.62	0.35	1.89	0.66	1.36	1.76	1.14	7.78
Leg 2 ..	1.32	0.44	3.08	0.92	2.51	3.24	2.86	14.37
Leg 3 ..	1.19	0.43	2.11	0.75	1.94	2.46	1.63	10.51
Leg 4 ..	1.36	0.53	2.86	0.97	2.42	3.78	2.02	13.94
Pedipalp ..		0.40	1.23	0.66	1.14		0.70	4.13
Chelicerae	Basal	0.75	Second	1.36				2.11

Types. Holotype male, Flora Hut, Mount Arthur Tableland, January 28, 1948, R. K. Dell (D.M.2/458); Allotype female, same data (D.M.2/459); Paratypes: same data, 1 ♂, 3 ♀ (D.M.2/460): Lower Flora Track, January 20, 1948, R. R. Forster, 1 ♀ (D.M.2/461); Flora Track, February 12, 1946, E. S. Gourlay, 1 ♂ (D.M.2/464); Mount Arthur Track, January 22, 1948, R. R. Forster, 1 ♀ (D.M.2/463); Mount Balloon, 4,100 feet, January 26, 1948, R. R. Forster, 2 ♂, 3 ♀ (D.M.2/462, C.M.A. 354).

Records. Leslie Valley Track, Mount Arthur District, January 26, 1948, R. R. Forster, 2 ♂, 1 ♀ (C.M.A. 353, D.M.2/509): Leslie Valley Track, January 24, 1948, J. T. Salmon, 1 ♂ (D.M.2/465).

Remarks. Closely related to *myersi*, separated by the more strongly developed bifid tubercle on the proximo-dorsal surface of the second segment of the male chelicera and the structure of the male and female pedipalps.

Hendea myersi ochrea n.s.sp.

Figs. 373–379

Male

Colour. Body golden brown with dark brown shading. Chelicerae and pedipalps pale brown with dark brown reticulate markings.

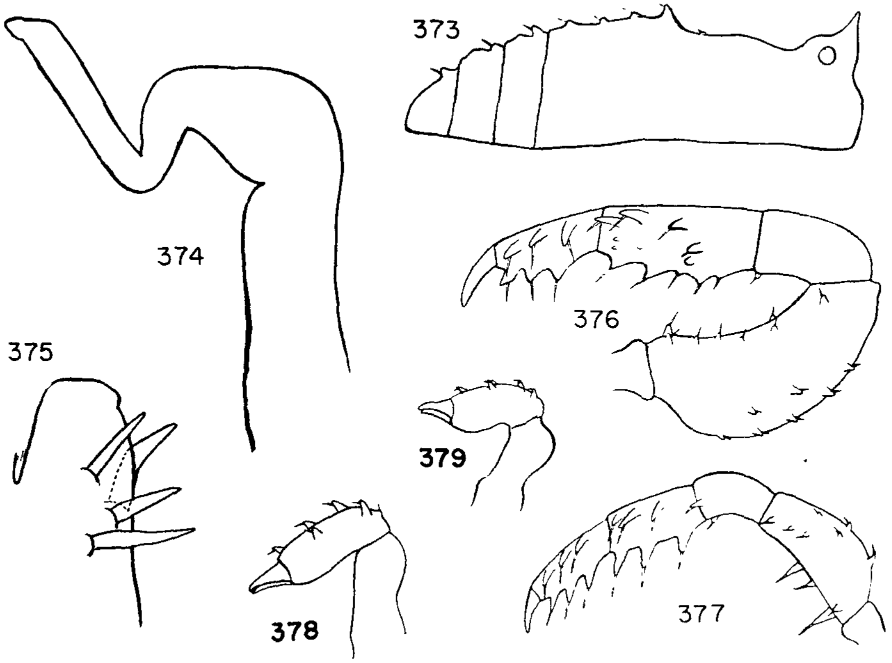
Body. The eyemound is separated from the anterior margin of the carapace by a distance equal to one-third of its diameter and is provided with a strong apical spinous process which appears in lateral view as shown in Fig. 373. The two tubercles behind each anterior corner of the carapace are short and blunt. A ridge extends along the anterior and lateral margins of the scute. Scutal groove very shallow; tergal region low, areas not separated by transverse grooves. There are few small tubercles on the median surfaces of Areas 1–4; Area 2 with a short median spinous tubercle (Fig. 373) which is smaller than the apical ocular process. A row of small tubercles extends across the posterior margin of the scute and each free tergite. Maxillary lobes of coxae 2 with a strong, erect, bluntly rounded secondary process.

Genitalia. The apical portion of the aedeagus is shown in Fig. 374. The epimere is deeply incised mesially, inferior and superior setae sub-equal, superior seta slightly curved (Fig. 375).

Chelicerae. Basal segment smooth. Dorsal surface of second segment with only simple tubercles as shown in Fig. 373.

Pedipalps (Fig. 376). Trochanter smooth. Femur stout, with only small tubercles on both dorsal and ventral surfaces. Tibia with three strong pro-ventral, five smaller retro-ventral tubercles and two small tubercles on the ventral surface at about one-third. Tarsus with three strong tubercles on both pro- and retro-ventral surfaces.

Legs. Granulate. Tarsal formula 6.16–17.4.4.



FIGS. 373-379 *Hendea myersi ochrea* n.s.sp.
Fig. 373 Lateral view of body; Fig. 374 Aedeagus of male genitalia; Fig. 375 Ventral plate of male genitalia; Fig. 376 Pro-lateral surface male pedipalp; Fig. 377 Pro-lateral surface female pedipalp; Fig. 378 Male chelicera; Fig. 379 Female chelicera.

Measurements

		Scute	Length	2.73	Width	2.33		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.88	0.31	1.67	0.75	1.32	1.63	1.14	7.70
Leg 2 ..	1.54	0.40	2.42	0.97	2.42	3.08	2.55	13.38
Leg 3 ..	1.10	0.40	1.80	0.75	1.54	2.20	1.41	9.20
Leg 4 ..	1.36	0.53	2.20	0.97	2.07	3.08	1.53	11.74
Pedipalp ..		0.48	1.76	0.84	1.14		1.10	5.32
Chelicera ..	Basal	0.97	Second	1.41				2.38

Female. Differing from male as follows:—The maxillary lobes are smooth. The tubercles on the dorsal surface of the second segment of the chelicera are small (Fig. 379). The pedipalps are small and slender, with three strong spinous tubercles on the ventral surface of the femur (Fig. 377).

Measurements

		Scute	Length	2.68	Width	2.42		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.79	0.31	1.41	0.62	1.19	1.36	0.92	6.60
Leg 2 ..	1.23	0.40	2.29	0.79	2.07	2.64	2.20	11.62
Leg 3 ..	0.84	0.39	1.85	0.57	1.45	1.76	1.19	8.05
Leg 4 ..	1.14	0.44	2.16	0.58	1.89	2.90	1.76	10.87
Pedipalp ..		0.31	1.23	0.56	0.88		0.66	3.64
Chelicera ..	Basal	0.84	Second	1.23				2.07

Types. Holotype male, 12 Mile, Greymouth, January 20, 1950, R. R. Forster (C.M.A. 366); Allotype female, same data (C.M.A. 367); Paratypes: same data, 7 ♂, 5 ♀ (C.M.A. 368, D.M.2/483); Greymouth, April 11, 1950, L. P. Hughson, 3 ♂, 1 imm. (C.M.A. 370); Greymouth, December 23, 1949, L. P. Hughson, 1 ♂ (C.M.A. 371); Old Taylorville Road, Greymouth, November 6, 1950, L. P. Hughson, 3 ♂, 1 ♀ (C.M.A. 373, A. 842).

Records. Arthurs Pass, April 8, 1950, R. Jenkin, 1 ♀ (C.M.A. 682); Otira, March, 1945, T. P. Harris, 1 ♂ (C.M.A. 686); Bullock Creek, Punakaiki, January 18, 1950, R. R. Forster, 21 ♂, 25 ♀ (C.M.A. 372, A.374).

Remarks. Separated from both *myersi* and *nelsonensis* by the paler coloration, absence of a strong bifid tubercle on the second segment of the male chelicera and the stronger development of the ocular spine.

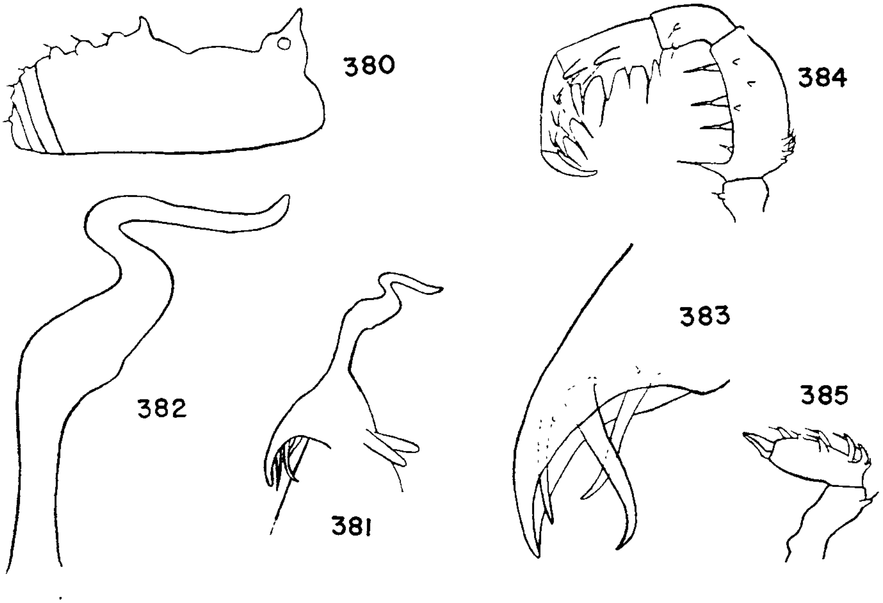
Hendea myersi cavernicola n.s.sp.

Figs. 380–385

Male

Colour. Apart from black shading around the eyes the entire animal is pale yellow-brown.

Body. The eyemound is separated from the anterior margin of the carapace by a distance equal to one-third of its diameter and bears a short apical spine which is almost equal in height to the eyemound proper. (Fig. 380) There are two small spinous tubercles behind each anterior corner rising from a low ridge which extends across the anterior margin of the carapace and down the lateral margins of the scute. Scutal groove narrow, not extending to the lateral margins. Tergal areas 1–4 with prominent rounded tubercles (Fig. 380) limited to the median surface. Area 2



Figs. 380-385 *Hendea myersi cavernicola* n.s.sp.

Fig. 380 Lateral view of body; Fig. 381 Male genitalia; Fig. 382 Aedeagus; Fig. 383 Ventral plate; Fig. 384 Pro-lateral surface male pedipalp; Fig. 385 Male chelicera.

with a small median spinous tubercle. Posterior margin of the scute and free tergites each with a transverse row of low tubercles. Maxillary lobes of coxae 2 without secondary processes.

Genitalia. The aedeagus is sinuous as shown in Figs. 381, 382. Ventral plate with a deep median incision, one superior and two inferior setae present, superior seta stronger than inferior (Fig. 383).

Chelicerae (Fig. 385). There are two small tubercles on the disto-dorsal surface of the basal segment, and a strong, unevenly bifid tubercle on the proximo-dorsal surface of the second segment which is followed closely by a similar but simple tubercle. There are also a number of smaller tubercles on the dorsal surface.

Pedipalps (Fig. 384). Slender. Femur with a strong conical proximo-ventral tubercle and two similar slightly smaller tubercles on the mid-ventral surface, two small tubercles on the proximo-dorsal surface, six on the distal half of the prolateral surface. There are two strong tubercles on the pro-ventral margin of the tibia, three retro-ventral. Tarsus with three tubercles on both pro- and retro-ventral surfaces.

Legs. Femora of all legs with small pustules. Tarsal formula 7.18–21.4.4.

Measurements Scute Length 2.24 Width 1.98

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.75	0.26	2.07	0.70	1.54	2.24	1.32	8.88
Leg 2 ..	1.58	0.40	3.34	0.71	2.86	3.92	2.86	15.67
Leg 3 ..	1.19	0.35	2.68	0.66	2.02	2.68	1.76	11.34
Leg 4 ..	1.36	0.41	3.52	1.44	2.64	3.93	2.42	14.72
Pedipalp ..		0.31	1.32	0.66	0.88		0.75	3.92
Chelicera ..	Basal	0.57	Second	0.97				1.54

Types. Holotype male, Waitomo Caves, February 13, 1949, C. Hubbs (C.M.A. 381); Paratype male, same data (C.M.A. 382).

Hendea myersi roeweri n.s.sp.

Figs. 386–392

Male

Colour. Scute orange brown, heavily shaded with black. Chelicerae and pedipalps with dark black reticulate markings.

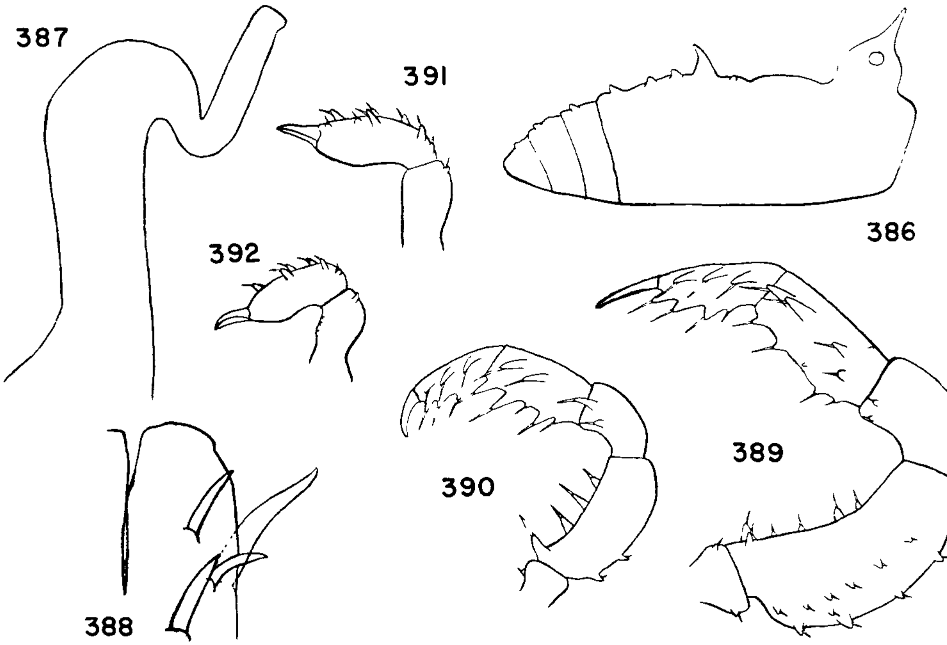
Body. Eyemound sub-spherical with a long slender apical spine, directed slightly forward as shown in Fig. 386. A low ridge extends along the anterior and lateral margins of the scute with two small dentiform tubercles behind each anterior corner. Scutal groove shallow. Tergal region low, Areas 1–4 with small tubercles, mainly on the medial surface, Area 2 with a strong median spinous process, curved back, equal in size to the ocular process (Fig. 386). Posterior margin of the scute and each free tergite with a transverse row of low tubercles. Maxillary lobes of coxae 2 with a strong, erect secondary process.

Genitalia. Distal portion of aedeagus as shown in Fig. 387. Ventral plate deeply incised, superior seta much stronger than inferior setae (Fig. 388).

Chelicerae. Two tubercles present on the disto-dorsal surface of the basal segment. Dorsal surface of second segment with simple tubercles as shown in Fig. 391.

Pedipalps. There is a pair of small tubercles on both dorsal and ventral surfaces of the trochanter, remaining segments differing only slightly from *ochrea* as shown in Fig. 389.

Legs. Sparsely granulate. Tarsal formula 6–7.16–18.4.4.



FIGS. 386-392 *Hendea myersi roeweri* n.s.sp.
Fig. 386 Lateral view of body; Fig. 387 Aedeagus of male genitalia; Fig. 388 Ventral plate of male genitalia; Fig. 389 Pro-lateral surface of male pedipalp; Fig. 390 Pro-lateral surface of female pedipalp; Fig. 391 Male chelicera; Fig. 392 Female chelicera.

Measurements

		Scute	Length	2.73	Width	2.38		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.79	0.31	2.20	0.88	1.67	2.16	1.32	9.33
Leg 2 ..	1.50	0.44	3.08	0.97	3.04	3.17	3.30	15.50
Leg 3 ..	1.14	0.40	2.20	0.89	1.76	2.86	1.67	10.92
Leg 4 ..	1.45	0.53	2.95	1.06	2.24	3.74	2.20	14.17
Pedipalps ..		0.40	2.07	1.14	1.14		0.88	5.63
Chelicera ..	Basal	0.75	Second	1.32				2.07

Female. Similar in structure to male but maxillary lobes smooth, pedipalp slender, with row of four strong spinous tubercles along the ventral surface of the femur (Fig. 390). The tubercles on dorsal surface of second segment of the chelicera smaller than male (Fig. 392).

Measurements

		Scute	Length	2.51	Width	2.33		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.66	0.31	1.67	0.62	1.23	1.58	1.10	7.17
Leg 2 ..	1.06	0.40	2.64	0.84	2.42	2.86	1.98	12.20
Leg 3 ..	0.92	0.35	1.89	0.57	1.54	2.10	1.98	8.35
Leg 4 ..	1.32	0.44	2.46	0.70	1.89	3.17	1.67	11.65
Pedipalps ..		0.31	1.10	0.53	0.92		0.75	3.52
Chelicerae	Basal	0.66	Second	1.06				1.72

Types. Holotype male, Okarito, Westland, December 17, 1949, R. R. Forster (C.M.A. 485); Allotype female, same data (C.M.A. 486); Paratypes, same data, 2 ♂, 1 ♀ (C.M.A. 383, D.M.2/383).

Remarks. Close to *ochrea*, but separated chiefly by more slender ocular spine which does not rise directly from the anterior margin of the eyemound and also by the different form of the aedeagus of the male.

Hendea maitaia n.sp.

Figs. 393–397

Male

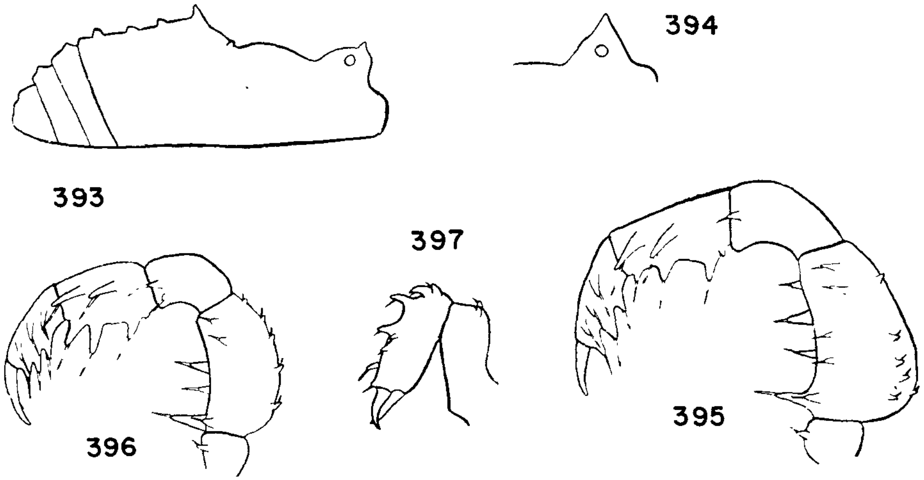
Colour. Ground colour orange-brown, but scute with blackish shading. Posterior margin of the scute and the free tergites are black. Chelicerae and pedipalps with dark-brown reticulate markings.

Body. Eyemound separated from the anterior margin of the carapace by a distance equal to one-third of its width, rising sharply up from the anterior surface, with a short tubercle on the dorsal surface in front of the eyes (Fig. 393). There is a low ridge across the anterior margin of the carapace, bearing two small lateral tubercles. The scutal groove is shallow, tergal region rising well above the carapace. Tergal areas and free tergites with a single transverse row of low tubercles. Area 2 with a small median spinous process as shown in Fig. 393. Maxillary lobes of coxae 2 with a blunt, erect, secondary process.

Genitalia. The genitalia of the single male specimen available was unfortunately damaged during preparation.

Chelicerae. Basal segment with a pair of small tubercles on the disto-dorsal surface. Second segment with a weakly bifid tubercle on proximo-dorsal surface followed by a number of strong simple tubercles.

Pedipalps (Fig. 397). Trochanter with a single small tubercle on the ventral surface. Femur stout, with a strong elongate proximo-ventral tubercle; three further strong



FIGS. 393-397 *Hendea maitaia* n.sp.

Fig. 393 Lateral view of body of male; Fig. 394 Lateral view eyemound female; Fig. 395 Pro-lateral surface male pedipalp; Fig. 396 Pro-lateral surface female pedipalp; Fig. 397 Male chelicera.

tubercles along the ventral surface and a number of smaller prolateral tubercles as shown in Fig. 395. Pro-ventral margin of tibia with two, retro-ventral margin of tibia and both ventral margins of tarsus with three strong spinous tubercles.

Legs. Normal. Tarsal formula 5.12–15.4.4.

Measurements

		Scute	Length	2.64	Width	2.29		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.66	0.35	1.58	0.57	1.14	1.63	0.92	6.85
Leg 2 ..	1.19	0.44	2.07	0.88	1.85	2.64	2.02	11.09
Leg 3 ..	0.97	0.40	1.58	1.50	1.36	1.98	1.23	9.02
Leg 4 ..	1.32	0.53	2.20	0.70	1.80	2.60	1.54	10.69
Pedipalp ..		0.35	1.36	0.75	0.97		0.75	4.18
Chelicera ..	Basal	0.79	Second	1.14				1.93

Female. Similar to male in general structure. The apical ocular spine is broader than in the male, giving the eyemound a more conical shape (Fig. 388). Chelicerae with two small tubercles on the disto-dorsal surface of the basal segment and a number of stronger tubercles on the dorsal surface of the second segment, proximal bifid. Pedipalps smaller than male, femur more slender (Fig. 396).

Measurements

		Scute	Length	2.73	Width	2.68		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.75	0.31	1.32	0.44	0.97	1.19	0.88	5.86
Leg 2 ..	1.32	0.40	1.67	0.75	1.76	2.07	1.80	9.77
Leg 3 ..	1.10	0.39	1.58	0.48	1.14	1.72	1.10	7.51
Leg 4 ..	1.32	0.40	1.67	0.88	1.58	2.24	1.41	9.50
Pedipalp ..		0.26	1.01	0.62	0.84		0.62	3.35
Chelicera ..	Basal	0.79	Second	1.01				1.80

Types. Holotype male, Maitai Valley, Nelson (C.M.A. 400), A. W. Parrott, Allotype female, same data (C.M.A. 401); Paratype: 1 ♀, same data (C.M.A. 402).

Hendea phillippsi n.sp.

Figs. 398–404

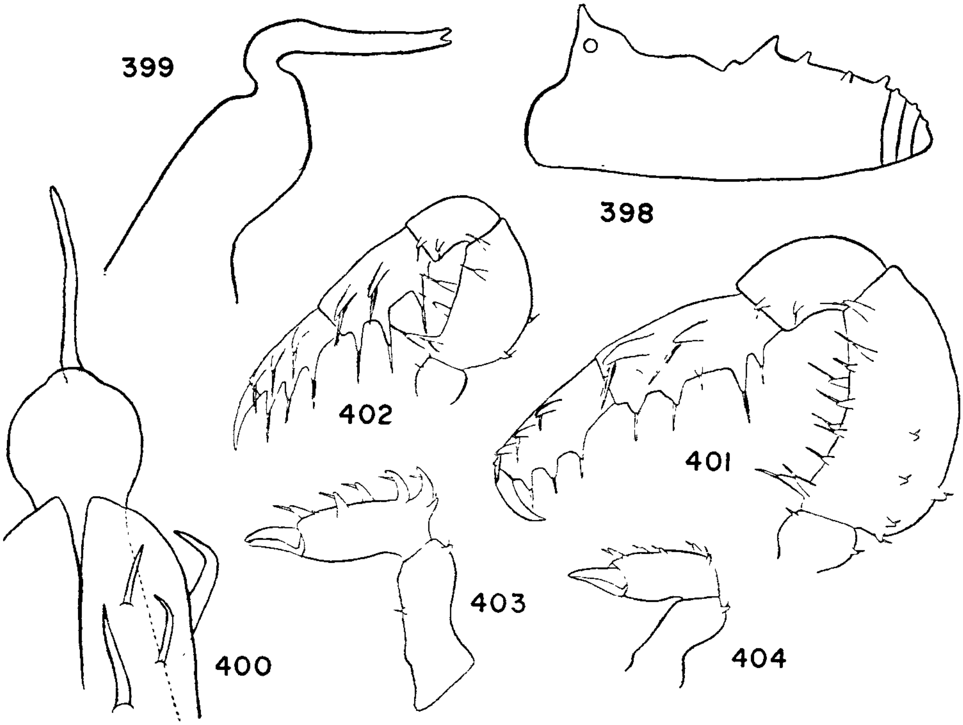
Male

Colour. The carapace is pale brown with black markings, tergal region, free tergites and sternites dark blackish-brown. The lateral swellings on the carapace are pale yellow.

Body. Eyemound large, with a strong apical spine which is two-thirds of the height of the eyemound proper, and separated from the anterior margin of the carapace by a distance equal to one half of its diameter (Fig. 398). A low ridge extends across the anterior margin of the scute and down the lateral margins, bearing two small dentiform tubercles on the antero-lateral surface. There is a swollen region on each mid-lateral surface of the carapace. Tergal areas and free tergites each with a transverse row of small tubercles; Area 2 with a stout median spinous process equal in height to the ocular spine. Maxillary lobes of coxae 2 with a strong secondary process.

Genitalia. Apical portion of aedeagus sinuous as shown in Fig. 399. One superior and three inferior setae, superior seta stronger and sharply bent apically (Fig. 400).

Chelicerae. Basal segment with two disto-dorsal tubercles. Second segment with strong tubercles on the dorsal surface, proximal tubercle unevenly bifid (Fig. 403).



FIGS. 398-404 *Hendea phillippsi* n.sp.
Fig. 398 Lateral view of body; Fig. 399 Aedeagus of male genitalia; Fig. 400 Ventral view of male genitalia; Fig. 401 Pro-lateral surface of male pedipalp; Fig. 402 Pro-lateral surface of female pedipalp; Fig. 403 Male chelicera; Fig. 404 Female chelicera.

Pedipalps (Fig. 401). Trochanter with a small tubercle on both dorsal and ventral surfaces. There are two elongate tubercles on the proximo-ventral surface of the femur, of which the inner tubercle is smaller, and a number of similar tubercles on the ventral and distal pro-lateral surfaces. The pro-ventral margin of the tibia is armed with two strong spinous tubercles and a third small distally situated tubercle. There are four tubercles on the retro-ventral margin of the tibia and three tubercles on both ventral margins of the tarsus.

Legs. Normal in appearance. Tarsal formula 6.14–17.4.4.

Measurements

		Scute	Length	3.12	Width	2.73		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.88	0.44	1.76	0.75	1.36	1.72	1.10	8.01
Leg 2 ..	1.41	0.48	2.64	1.01	2.42	3.04	2.55	13.55
Leg 3 ..	1.23	0.47	2.07	0.84	1.72	2.24	1.41	9.98
Leg 4 ..	1.54	0.53	2.46	0.97	2.02	2.77	1.98	12.27
Pedipalp ..		0.44	1.80	0.96	1.36		1.10	5.66
Chelicerae	Basal	0.92	Second	1.63				2.55

Female. Similar in general structure to male. The pedipalp is relatively smaller with fewer tubercles present on the ventral surface of the femur (Fig. 402). Tubercles on the dorsal surface of the second segment of the chelicera smaller and proximo-dorsal tubercle simple, not bifid (Fig. 404).

Measurements

		Scute	Length	2.86	Width	2.60		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.70	0.35	1.58	0.66	1.23	1.76	1.19	7.47
Leg 2 ..	1.19	0.44	2.24	0.75	1.58	2.33	1.98	10.51
Leg 3 ..	0.97	0.40	1.89	0.76	1.54	2.20	1.32	9.08
Leg 4 ..	1.36	0.62	2.64	0.79	1.98	2.95	1.72	12.06
Pedipalp ..		0.35	1.32	0.66	0.97		0.79	4.09
Chelicera ..	Basal	0.70	Second	1.28				1.98

Types. Holotype male, Wainui-o-mata, Wellington, April 16, 1947, R. K. Dell (D.M.2/467), Allotype female, same data (D.M.2/468), Paratypes: same data, 3 ♀ (D.M.2/469, C.M.A. 355); Butterfly Creek, Days Bay, Wellington, June 2, 1946, J. T. Salmon, 2 ♀ (D.M.2/473); Days Bay, November 27, 1920, H. Hamilton, 1 ♂ (D.M.2/470), November 30, 1941, R. R. Forster, 1 ♀ (C.M.A. 356), November 16, 1945, R. R. Forster, 1 ♂ (D.M.2/503), July 19, 1942, R. R. Forster, 1 ♂, 1 ♀ (D.M.2/471), June 28, 1942, R. R. Forster, 2 ♂, 2 ♀ (D.M.2/501); Stokes Valley, Wellington, January 10, 1947, R. R. Forster, 1 ♂, 4 ♀ (C.M.A. 403), same locality, November 30, 1947, R. K. Dell, 7 ♂, 6 ♀ (C.M.A. 704); Christchurch, Canterbury, January, 1945, Coll. ?, 2 ♂ (C.M.A. 407).

Remarks. The record of this species from Christchurch is based on two specimens in the collection of the Canterbury Museum labelled "Christchurch, January, 1945". As specimens of spiders and harvestmen were received from Wellington by the Museum at about this period and as no further specimens have been found in Canterbury, it is almost certain that these specimens are incorrectly labelled. This species is named for Mr. W. J. Phillipps whose earlier paper on New Zealand Opiliones, published in collaboration with Mr. R. E. R. Grimmett, has proved very helpful to the present author.

Hendea phillippsi stiphra n.s.sp.

Figs. 405–411

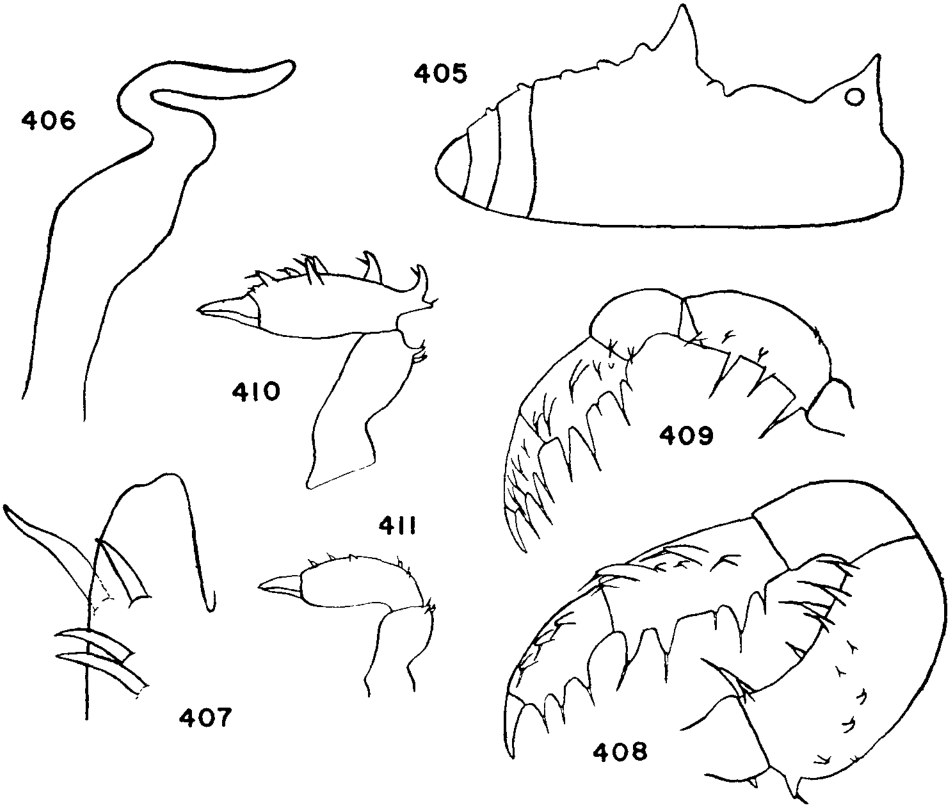
Male

Colour. Scute orange-brown with faint blackish-brown shading. Posterior margin of the scute, free tergites and the sternites heavily shaded with black. Chelicerae and pedipalps with brown reticulate markings.

Body. Eyemound stout, tapering apically to form a strong apical spinous process which is equal in height to three-fifths of that of the eyemound proper (Fig. 405). It is separated from the anterior margin of the carapace by a distance equal to one-half of its width. There are two small spinous tubercles behind each anterior corner of the carapace on the low ridge which extends across the anterior margin of the carapace and down the lateral margins. Scutal groove deep. Tergal areas each with a transverse row of small, rounded and shiny tubercles, median surface of Area 2 drawn up into a strong spinous process which is almost equal in size to the eyemound (Fig. 405). Free tergites and the sternites with a transverse row of small tubercles or granules. Maxillary lobes of coxae 2 with an erect, blunt secondary process.

Genitalia. Aedeagus as shown in Fig. 406. The epimere is deeply incised mesially, superior seta much stronger than inferior setae, three inferior setae (Fig. 407).

Chelicerae. Two small slender tubercles on disto-dorsal surface of basal segment. Second segment with a strong, unevenly bifid, proximo-dorsal tubercle and further strong but simple tubercles along the dorsal surface, as shown in Fig. 410.



FIGS. 405-411 *Hendea stiphra* n.sp.

Fig. 405 Lateral view of body; Fig. 406 Aedeagus of male genitalia; Fig. 407 Ventral plate of male genitalia; Fig. 408 Pro-lateral surface of male pedipalp; Fig. 409 Pro-lateral surface of female pedipalp; Fig. 410 Male chelicera; Fig. 411 Female chelicera.

Pedipalps (Fig. 408). Trochanter with a single tubercle on the dorsal surface. There is a strong dentiform tubercle on the proximo-dorsal surface of the femur and three similar smaller tubercles on the pro-lateral surface. There are two proximo-ventral tubercles, inner tubercle small, and five on the mid– and disto-ventral surfaces. Pro-ventral margin of tibia with six tubercles of which the second and fifth are strong, retro-ventral margin with five tubercles of which the second, fourth and fifth are strong. Tarsus with three strong tubercles on both ventral margins.

Legs. Granulate. Tarsal formula 6–7. 15–17. 4.4.

Measurements

Scute Length 2.90 Width 2.55

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.88	0.35	1.85	0.84	1.45	1.98	1.14	8.49
Leg 2 ..	1.50	0.44	2.77	1.10	2.82	3.61	2.29	14.53
Leg 3 ..	1.28	0.40	2.20	0.92	1.76	2.55	1.72	10.83
Leg 4 ..	1.54	0.53	2.68	0.97	2.20	3.52	2.02	13.46
Pedipalp ..		0.52	1.85	0.88	1.32		1.01	5.58
Chelicera ..	Basal	0.75	Second	1.54				2.29

Female. Similar in appearance to male. Maxillary lobes smooth. Only small and simple tubercles on the dorsal surface of the second segment of the chelicera (Fig. 411). Pedipalps smaller than male, with only three spinous tubercles along the ventral surface of the femur (Fig. 409).

Measurements

Scute Length 2.86 Width 2.90

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.66	0.31	1.67	0.66	1.32	1.54	1.28	7.44
Leg 2 ..	1.28	0.48	2.55	0.75	2.20	2.95	2.46	12.67
Leg 3 ..	1.10	0.40	1.85	0.84	1.50	1.98	1.41	9.08
Leg 4 ..	1.32	0.53	2.38	0.75	1.89	2.60	2.68	12.15
Pedipalp ..		0.44	1.32	0.62	0.88		0.79	4.05
Chelicera ..	Basal	0.66	Second	1.23				1.89

Types. Holotype male, South Terrace, Karamea, January 20, 1950, R. R. Forster (C.M.A. 375), Allotype female, same data (C.M.A. 376), Paratypes: same data, 16 ♂, 24 ♀ (C.M.A. 377, D.M.2/484).

Records. Karamea Bluff, January 20, 1950, R. R. Forster, 2 ♂, 3 ♀ (C.M.A. 379); Karamea Bluff, March 4, 1949, A. C. O'Connor, 4 ♂, 11 ♀ (C.M.A. 380); Oparara, Karamea, January 24, 1950, R. R. Forster, 11 ♂, 11 ♀ (C.M.A. 378).

Remarks. The massive development of the median spine on Area 2 immediately separates this sub-species from *phillippsi* to which it is related.

Hendea oconnori n.sp.

Figs. 412–418

Male

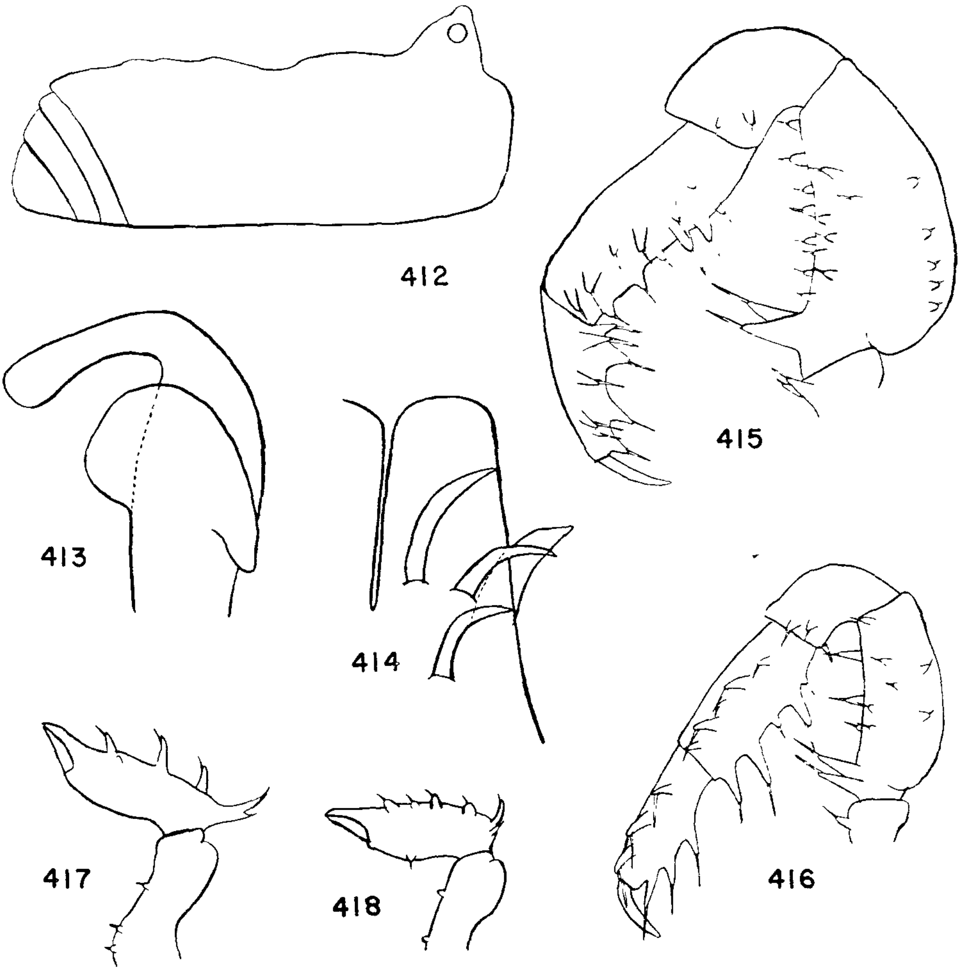
Colour. Ground colour orange-brown, with black reticulate markings on the eyemound and on the surface of the carapace immediately in front and behind. Lateral margins of the carapace, tergal region of the scute and free tergites covered with faint black shading. Dorsal surfaces of chelicerae and pedipalps with black reticulate markings.

Body. Eyemound separated from the anterior margin of the carapace by a distance equal to two-thirds of its width, with a short, blunt apical process, appearing subconical in side view as shown in Fig. 412. Carapace smooth. Tergal groove shallow; tergal areas defined by shallow median grooves. Area 2 without a median process, Areas 3 and 4 with a median pair of small tubercles. Maxillary lobes of coxae 2 with a small, shiny secondary process on the median surface.

Genitalia. The apical portion of the aedeagus appears in lateral view as shown in Fig. 413, with a pair of broad, flattened lateral plates. The ventral plate with a deep median incision which reaches to more than half of its length, superior seta extremely stout, much stouter than inferior setae (Fig. 414).

Chelicerae. Basal segment smooth apart from three small rounded tubercles on the ventral surface. There is a strong bifid tubercle on the proximo-dorsal surface of the second segment and three slightly smaller, simple tubercles along the dorsal surface as shown in Fig. 417.

Pedipalps. There are two small conical tubercles on the ventral surface of the trochanter. The proximo-dorsal surface of the femur distended. Two strong equally developed, conical tubercles are present on the proximo-ventral surface and a number of small tubercles on the ventral surface and as a row along the pro-dorsal surface as shown in Fig. 417. Both pro- and retro-ventral margins of tibia with



FIGS. 412-418 *Hendea oconnori* n.sp.

Fig. 412 Lateral view of body; Fig. 413 Aedeagus of male genitalia; Fig. 414 Ventral plate of male genitalia; Fig. 415 Pro-lateral surface male pedipalp; Fig. 416 Pro-lateral surface of female pedipalp; Fig. 417 Male chelicera; Fig. 418 Female chelicera.

six tubercles, of which some are strong, as shown in Fig. 417. Tarsus with four tubercles on both ventral margins.

Legs. Granulate, more prominent on femora. Tarsal formula 6.18–22.4.4.

Measurements

		Scute	Length	3.12	Width	2.77		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.84	0.40	2.29	0.79	1.41	2.07	1.23	9.03
Leg 2 ..	1.58	0.53	3.26	2.42	0.97	3.21	2.42	14.39
Leg 3 ..	1.14	0.48	2.51	0.84	1.89	2.68	1.80	11.34
Leg 4 ..	1.41	0.57	3.08	1.01	2.64	3.34	2.42	14.47
Pedipalp ..		0.44	1.98	0.88	1.45		1.10	5.85
Chelicerae	Basal	0.88	Second	1.32				2.20

Female. Very similar to male in structure. The maxillary lobes are smooth. The tubercles on the dorsal surface of the second segment of the chelicera are smaller, the bifid tubercle of the male is represented by an elongate simple tubercle with a small rounded tubercle at its base (Fig. 418). The pedipalps are more slender with the arrangement of tubercles as shown in Fig. 416.

Measurements

		Scute	Length	2.64	Width	2.63		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.79	0.26	1.45	0.57	1.19	1.41	1.14	6.81
Leg 2 ..	1.28	0.44	2.29	0.88	2.20	2.46	2.02	11.57
Leg 3 ..	0.97	0.43	1.98	0.70	1.54	2.02	1.58	9.22
Leg 4 ..	1.32	0.53	2.60	0.75	2.11	2.86	2.01	12.18
Pedipalp ..		0.40	1.23	0.57	0.92		0.88	4.00
Chelicerae	Basal	0.66	Second	1.06				1.72

Types. Holotype male, Canaan, N.W. Nelson, November, 1951, A. C. O'Connor (C.M.A. 389); Allotype female, same data (C.M.A. 390); Paratypes: same data, 4 ♂, 9 ♀ (C.M.A. 391, 393, D.M.2/491).

Records. Kairuru, N.W. Nelson, December, 1951, A. C. O'Connor, 1 ♂, 2 ♀ (C.M.A. 392); Dun Mountain, 2,000 feet, May 15, 1942, B. A. Holloway, 1 ♂ (D.M.2/920).

Remarks. This species is easily distinguished from all other species of this genus by the absence of the median spine from Area 2.

Hendea bucculenta n.sp.

Figs. 419–426

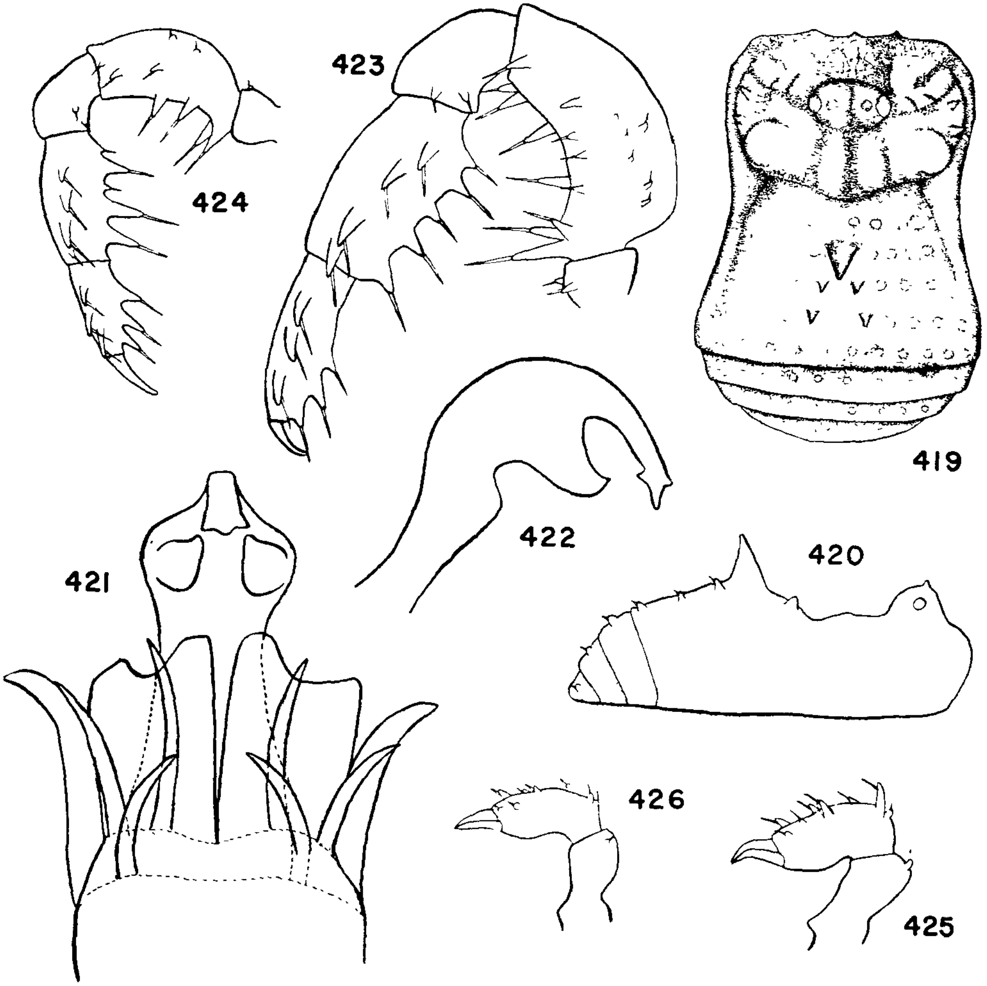
Male

Colour. Carapace pale-brown with dark-brown markings as shown in Fig. 419. Tergal region of the scute, free tergites and the sternites dark-brown. The distended areas of the carapace are of a pale yellow colour and stand out conspicuously. Dorsal surfaces of chelicerae and pedipalps with black reticulate markings.

Body. The eyemound is evenly rounded, with a shallow median longitudinal furrow, and two apical pustules as shown in Figs. 419, 420 and 438. It is separated from the anterior margin of the carapace by a distance equal to one half of its width. There are two small spiniform tubercles near the mid-lateral margins of the carapace and two distended areas near the postero-lateral margins (Fig. 419). The scutal groove is distinct. Tergal areas and free tergites with a transverse row of small rounded tubercles. Area 2 with a strong median spinous process which is higher than the eyemound (Fig. 420) and two smaller spinous tubercles on the median surface of Areas 3 and 4. Maxillary lobes of coxae 2 lack secondary processes.

Genitalia. The distal portion of the aedeagus is flattened and expands sub-distally to form a pair of lateral flaps, beyond which the aedeagus is narrow and is curved back down the ventral surface (Figs. 421, 423). The ventral plate is completely divided, the superior seta is very strong, much stouter but only slightly longer, than the inferior setae (Fig. 421).

Chelicerae. There are a pair of small tubercles on the disto-dorsal surface of the basal segment. There are two tubercles on the proximo-dorsal surface of the second segment, the more proximal short and rounded, the more distal long and slender, representing the two tubercles which are fused in many species to form a single bifid tubercle. There are further small tubercles on the dorsal surface as shown in Fig. 425.



FIGS. 419-426 *Hendea bucculenta* n.sp.

Fig. 419 Dorsal view of body; Fig. 420 Lateral view of body; Fig. 421 Ventral view of male genitalia; Fig. 422 Lateral view of aedeagus; Fig. 423 Pro-lateral surface of male pedipalp; Fig. 424 Pro-lateral surface of female pedipalp; Fig. 425 Male chelicera; Fig. 426 Female chelicera.

Pedipalps (Fig. 423). Trochanter with a pair of small tubercles on the ventral surface. Femur stout, dorsal surface smooth, seven elongate conical tubercles on the ventral surface, 3 proximal, 2 median and 2 distal and a number of smaller tubercles on the pro-lateral surface. Tibia with four pro- and five retro-ventral tubercles. Tarsus with three tubercles on both ventral margins.

Legs. Granulate. Tarsal formula 6.16–17.4.4.

Measurements

Scute Length 2.86 Width 2.77

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.88	0.35	1.67	0.75	1.54	1.76	1.32	8.27
Leg 2 ..	1.45	0.44	2.82	0.97	2.64	3.12	2.68	14.12

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 3	1.23	0.42	2.20	0.88	1.76	2.42	1.32	10.23
Leg 4	1.58	0.57	2.90	0.89	1.85	3.52	1.98	13.29
Pedipalp		0.53	1.76	0.79	1.32		0.97	5.37
Chelicera	Basal	0.84	Second	1.32				2.16

Female. Similar in general appearance. Pedipalp slender, femur with two strong proximo-ventral tubercles and two mid-ventral. Tibia with same number of tubercles but first and third retro-ventral and fourth pro-ventral tubercles small (Fig. 424). Second proximo-dorsal tubercle of the second segment of the chelicera small (Fig. 426).

Measurements

		Scute	Length	2.20	Width	2.60		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	0.79	0.31	1.63	0.70	1.36	1.76	1.10	7.65
Leg 3	1.10	0.35	1.76	0.71	1.67	2.02	1.28	8.89
Leg 4	1.32	0.44	2.33	0.92	2.20	3.08	1.76	12.05
Pedipalp		0.40	1.32	0.62	0.88		0.84	4.06
Chelicera	Basal	0.62	Second	1.10				1.72

Types. Holotype male, Western side of Rimutaka Range, June 13, 1948, R. K. Dell (D.M.2/492); Allotype female, same data (D.M.2/493); Paratypes: same data, 2 ♂, 5 ♀ (C.M.A. 394, D.M.2 494).

Records. Days Bay, Wellington, December 31, 1942, R. R. Forster, 1 ♂, 1 ♀ (D.M.2 495); Stokes Valley, Wellington, January 10, 1948, R. R. Forster, 3 ♂, 1 ♀ (D.M.2 751); Silverstream, Wellington, September 11, 1924, R. E. R. Grimmett, 1 ♂, 1 ♀ (D.M.2 754); Little Akatarawa, March 1, 1947, R. R. Forster, 1 ♀ (D.M.2 496).

Remarks. The presence of two small tubercles on the eyemound separates this species from all other species of this genus.

Hendea nelsonensis n.sp.

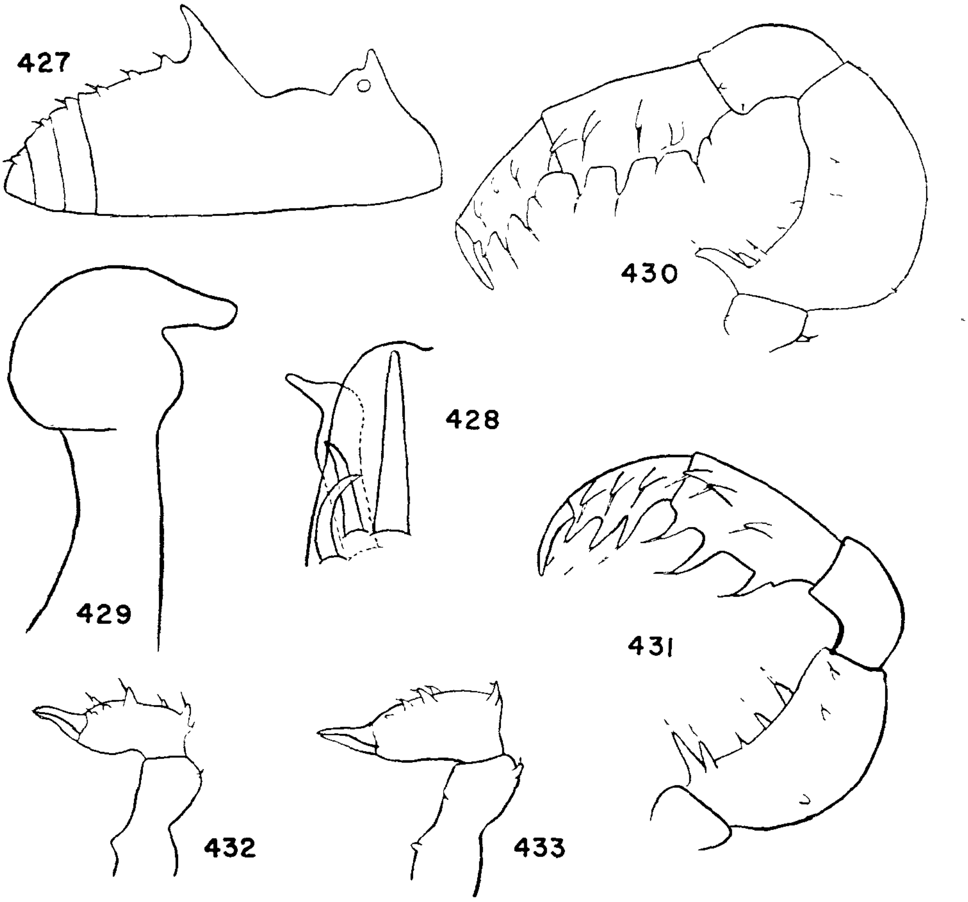
Figs. 427–433

Male

Colour. Ground colour reddish-brown, carapace, lateral margins of the tergal region and free tergites heavily shaded with black. Chelicerae and pedipalps with black reticulate markings.

Body. Eyemound with a short apical spinous process as shown in Fig. 437, separated from the anterior margin of the carapace by a distance equal to one-half of its diameter (Fig. 427). There is a low ridge extending across the anterior margin of the carapace and down the lateral margins provided with two small dentiform tubercles at each anterior corner. There is a slightly distended area on the mid-lateral surfaces of the carapace. The scutal groove is distinct. The median surface of the tergal region immediately behind this groove rises up to merge with the massive spinous process on the median surface of Area 2, as shown in Fig. 427. Tergal areas with small shiny tubercles, which extend to the lateral ridge on Areas 3 and 4 and the lateral margins on the posterior margin of the scute. Free tergites and the sternites with small low, tubercles. Maxillary lobes of coxa 2 with small rounded secondary process.

Genitalia. Aedeagus distended distally, with a short tubular projection at right angles as shown in Fig. 429. There is a shallow indentation of the mid-dorsal surface of



FIGS. 427-433 *Hendea nelsonensis* n.sp.
Fig. 427 Lateral view of body; Fig. 428 Ventral plate of male genitalia; Fig. 429 Aedeagus; Fig. 430 Pro-lateral surface male pedipalp; Fig. 431 Pro-lateral surface female pedipalp; Fig. 432 Male chelicera; Fig. 433 Female chelicera.

the ventral plate, I 1 and 2 only half of the size of I 3; S 1 slightly longer than I 3 but much stouter and bent distally, as shown in Fig. 428.

Chelicerae. There are a number of tubercles on the dorsal surface of the second segment as shown in Fig. 432, two proximal tubercles fused at base.

Pedipalps (Fig. 430). Trochanter with a small tubercle on both dorsal and ventral surfaces. Femur with a small dentiform tubercle on the dorsal surface at about one-quarter, strong proximo-ventral spinous tubercle flanked on each side by a smaller tubercle and with two smaller tubercles near the mid-ventral surface. Tibia with three pro-ventral tubercles, one proximo-ventral and five retro-ventral tubercles, the first and third retro-ventral tubercles being small. Tarsus with three tubercles on both pro- and retro-ventral margins.

Legs. Granulate. Tarsal formula 5–6.15–17.4.4.

Measurements

		Scute	Length	2.95	Width	2.68		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.84	0.35	1.76	0.88	1.63	1.76	0.92	8.14
Leg 2 ..	1.54	0.44	2.77	1.01	2.64	3.52	2.64	14.56
Leg 3 ..	1.10	0.40	1.85	0.88	1.76	2.68	1.14	9.81
Leg 4 ..	1.45	0.44	2.51	1.06	2.07	3.67	1.67	12.87
Pedipalp ..		0.57	1.85	0.86	1.50		1.01	5.79
Chelicera ..	Basal	1.10	Second	1.32				2.42

Female. Similar in general structure to male. Tubercles on the dorsal surface of the second segment of the chelicerae smaller (Fig. 433). Pedipalp as shown in Fig. 431.

Measurements

		Scute	Length	2.86	Width	2.68		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.84	0.31	1.80	0.70	1.36	1.76	1.10	7.87
Leg 2 ..	1.41	0.44	2.64	0.92	2.29	2.82	2.64	13.16
Leg 3 ..	1.10	0.40	1.63	0.88	1.54	2.29	1.36	9.20
Leg 4 ..	1.32	0.53	2.64	0.93	1.98	3.43	1.63	12.46
Pedipalp ..		0.43	1.14	0.70	1.01		0.84	4.12
Chelicera ..	Basal	0.92	Second	1.14				2.06

Types. Holotype male, Bainham, N.W. Nelson, February, 1949, A. C. O'Connor (C.M.A. 395), Allotype female, Canaan, Nelson, November, 1951, A. C. O'Connor (C.M.A. 397); Paratypes: Bainham, February, 1949, A. C. O'Connor, 1 ♂ (C.M.A. 396); Canaan, November, 1951, 3 ♂, 3 ♀ (C.M.A. 398, D.M.2/497).

Records. Kairuru, N.W. Nelson, December, 1948, A. C. O'Connor, 2 ♀ (C.M.A. 399).

Hendea fiordensis n.sp.

Figs. 434–440

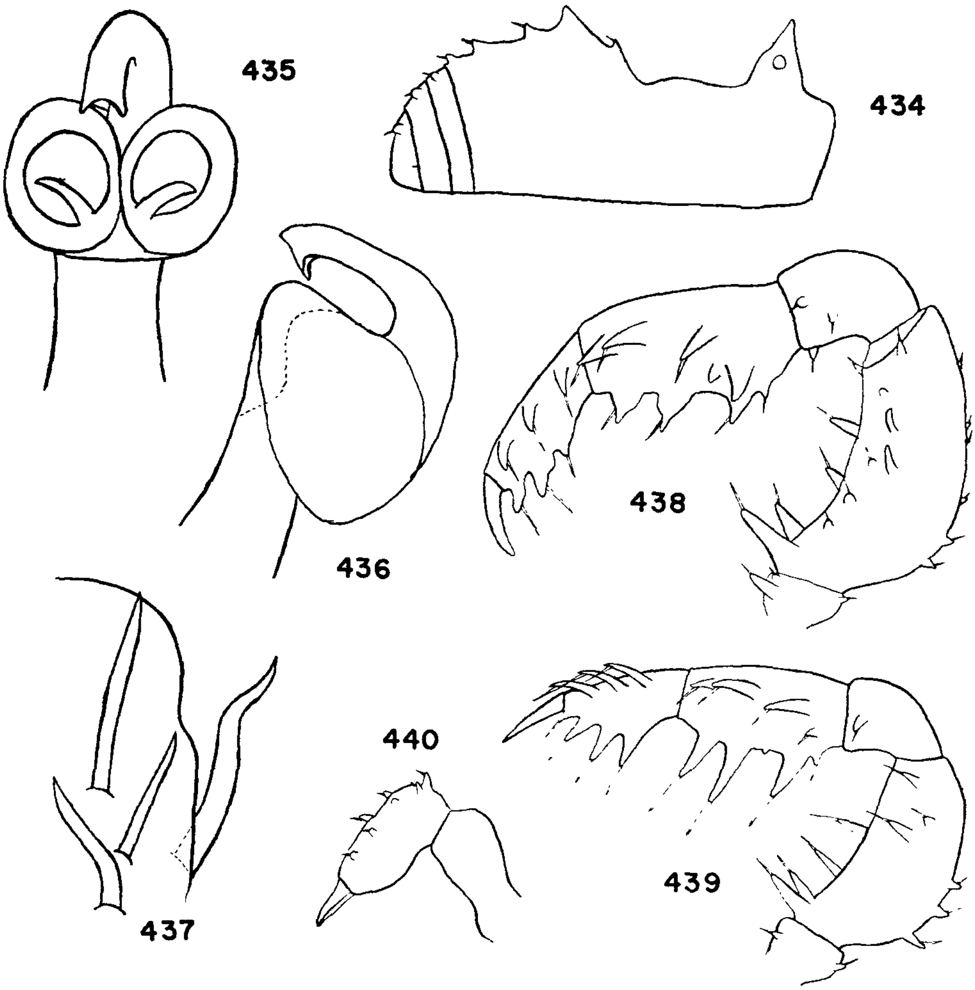
Male

Colour. Ground colour orange-brown, but heavily shaded with black. Chelicerae and pedipalps closely covered with black reticulate markings.

Body. Viewed from the side the eyemound is sub-conical (Fig. 434), separated from the anterior margin of the carapace by a distance only slightly less than that of the diameter of the eyemound. There is no ridge present on the anterior margin of the carapace but a ridge extends down the lateral margins of the scute behind the two small spinous tubercles situated at each anterior corner of the carapace. The tergal areas are not separated by grooves. Area 1 with four small rounded tubercles, Area 2 with a strong median spinous process, Areas 3 and 4 with a row of small tubercles, median conical. Posterior margin of the scute and free tergites each with a transverse row of low rounded tubercles without a secondary process but with a few small granules. Maxillary lobes of coxae 2 with an erect secondary process.

Genitalia. The distal portion of the aedeagus is complex, with the structure shown in Figs. 435, 436. The ventral plates are entire, distal inferior seta longer than median and proximal, almost equal in length to the superior seta, which is stouter and sinuous apically (Fig. 437).

Chelicerae. Basal segment smooth. Dorsal surface of second segment with a number of small tubercles, two proximo-dorsal tubercles contiguous but not fused to form a bifid tubercle (Fig. 440).



FIGS. 434-440 *Hendea fiordensis* n.sp

Fig. 434 Lateral view of body; Fig. 435 Ventral view of aedeagus; Fig. 436 Lateral view of aedeagus; Fig. 437 Ventral plate of male genitalia; Fig. 438 Pro-lateral surface male pedipalp; Fig. 439 Pro-lateral surface female pedipalp; Fig. 440 Male chelicera.

Pedipalps (Fig. 438). There are two tubercles on the ventral surface of the trochanter of which the proximal is conical and a small rounded tubercle on the dorsal surface. The femur is not stout, with two strong conical tubercles on the proximo-ventral surface and two similar tubercles near the mid-ventral surface; pro-lateral surface with two spinous tubercles in addition to four small rounded tubercles. There are six small dentiform tubercles along the dorsal surface. Tibia with three strong spinous tubercles on the pro-ventral margin, strong spinous tubercle on proximo-ventral surface followed by a smaller more rounded tubercle; four tubercles on retro-ventral margin, proximal small, two distal distended at base, constricted apically. Tarsus with three tubercles on both pro- and retro-ventral margins, two distal retro-ventral tubercles of same structure as tibia.

Legs. Legs sparsely granulate, strong, squat, spinous process present on the disto-ventral surface of femora 2 and 3. Tarsal formula 6–7.15–17.4.4.

Measurements

Scute. Length 3.30 Width 3.04

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.19	0.44	2.24	0.79	1.85	2.20	1.61	10.32
Leg 2 ..	1.76	0.53	3.65	0.88	3.17	3.74	2.46	16.19
Leg 3 ..	1.41	0.48	2.24	0.97	2.11	2.86	1.54	11.61
Leg 4 ..	1.76	0.53	3.97	1.10	2.64	3.92	2.07	15.99
Pedipalp ..		0.52	2.42	0.88	1.76		1.32	6.90
Chelicera ..	Basal	1.19	Second	1.45				2.64

Female. Similar to male in general structure. The pedipalps are more slender, as shown in Fig. 439. Tibia with a small proximo-ventral tubercle, tubercles on the retro-ventral margins of tibia and tarsus long and slender. Spinous process absent from the femora of legs 2 and 3.

Measurements

Scute. Length 3.13 Width 3.04

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.88	0.31	1.76	0.75	1.58	1.67	0.97	7.92
Leg 2 ..	1.54	0.48	2.73	1.01	2.51	2.68	1.76	12.71
Leg 3 ..	1.10	0.44	1.89	0.88	1.76	2.46	1.19	9.72
Leg 4 ..	1.55	0.53	3.08	0.92	2.29	3.76	1.63	13.76
Pedipalp ..		0.44	1.36	0.62	0.97		1.01	4.40
Chelicera ..	Basal	0.88	Second	1.23				2.11

Types. Holotype male, Caswell Sound, April 19, 1949, R. R. Forster (C.M.A. 384); Allotype female, same data (C.M.A. 385), Paratypes: same data, 1 ♂, 11 ♀ (C.M.A. 386); Stillwater Base Camp, Caswell Sound, April 11, 1949, R. R. Forster, 1 ♂, 3 ♀ (C.M.A. 387); Stillwater Base Camp, March 13, 1949, R. K. Dell, 7 ♂, 3 ♀ (D.M. 2/489, 2/750); Upper Stillwater River, April 13, 1949,R. R. Forster, 1 ♂, 1 imm. (C.M.A. 388); Leslie Clearing, Caswell Sound, March 15, 1949, R. K. Dell, 2 ♂, 8 ♀ (D.M.2/487), same locality, March 16, 1949, R. K. Dell, 3 ♂, 8 ♀ (D.M.2/486).

Records. Sinbad Gulley, Milford Sound, January 29, 1946, R. R. Forster, 1 ♂ (D.M.2/490).

Remarks. This distinctive species appears closely related to *nelsonensis*. The male genitalia of both of these species is very distinctive.

Genus *HENDEOLA* n.gen.

Eyemound separated from the anterior margin of the carapace; without strong apical spine. Anterior margin of carapace without tubercles. Scute and free tergites without pustules or strong tubercles; tergal areas broken, by longitudinal grooves, into small segments. Femur of leg 1 tuberculate, calcaneus shorter than astragalus. Tarsal formula 4.14–16.4.4. Side branches of claws 3 and 4 much shorter than median prong. Sexual dimorphism in chelicerae and pedipalps. Male dimorphism not recorded.

Genotype *Hendeola bullata* n.sp.

This genus is related to *Hendea* from which it is separated by the structure of the tergal region of the scute, the absence of strong tubercles on the scute, and by possessing only four segments to tarsus 1. It bears close resemblance to *Dingupa* Forster 1952, from Western Australia, which however I have placed in the tribe Adaeini. Unfortunately the structure of the genitalia of *Dingupa* is not known but if this does show affinity with *Hendeola* it will be necessary to transfer the former genus to the Triaenonychini.

Key to males of Hendeola

1. Second segment of the chelicera with numerous small tubercles in addition to the strong proximo-dorsal process.. 2
   Dorsal surface of the second segment of the chelicera smooth apart from the proximo-dorsal process .... *bullata* n.sp.
2. Proximo-dorsal process on the second segment of the chelicera relatively small, less than one quarter of the length of the segment, tubercles limited to the disto-dorsal surface ....*woodwardi* n.sp.
   Proximo-dorsal process on the second segment of the chelicera equal to more than one-third of the length of the segment; tubercles present along the entire dorsal surface...*bullata pterna* n.s.sp.

Hendeola bullata n.sp.

Figs. 441–447

Male

Colour. General colour reddish-brown with black shading. Chelicerae, pedipalps and coxae with faint black reticulate markings. Legs dark-brown.

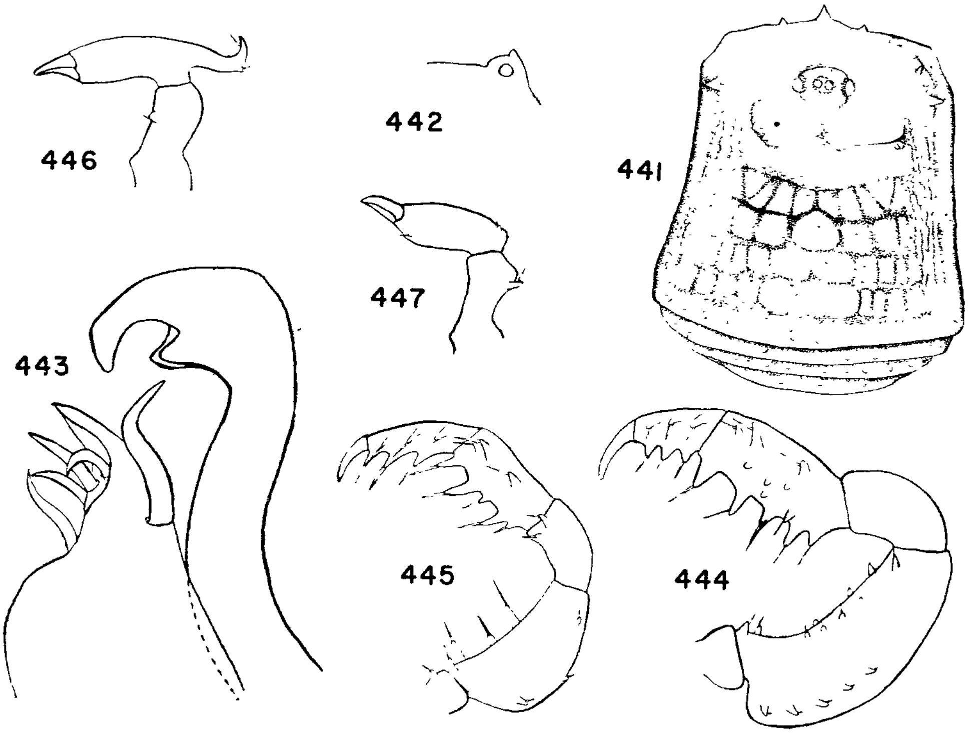
Body. The eyemound is relatively low, armed with a pair of small apical tubercles and separated from the anterior margin of the carapace by a distance equal to its diameter (Figs. 441, 442). There is a low ridge extending around the anterior margin of the carapace and two small denticulate tubercles behind each anterior corner. The more posterior of these tubercles is the stronger. There are two small swellings behind the eyemound and a larger distended area on each mid-lateral surface (Fig. 441). The scutal groove is deep on the median surface but does not extend to the lateral margins. Tergal areas separated by shallow grooves. Areas 1–4 are broken into a number of irregular segments by longitudinal grooves, median segments each provided with a small tubercle. The lateral surfaces of the tergal region and the posterior surface of the carapace are wrinkled in appearance (Fig. 442). Posterior margin of the scute and free tergites each with a transverse row of small low tubercles. Maxillary lobes of coxae 2 smooth.

Genitalia. The aedeagus is excavated below in the form of a hood, with a pair of lateral lobes as shown in lateral view in Fig. 443. Ventral plate with two groups of five setae, S 1 strong and sinuous (Fig. 443).

Chelicerae. The basal segment is smooth apart from a small rounded ventral tubercle. Second segment with a strong proximo-dorsal horn-like process, as shown in Fig. 446.

Pedipalps (Fig. 444). Trochanter smooth. Femur slightly curved, rising sharply above the trochanter, with a row of five small tubercles along the proximal half of the pro-dorsal surface, two small conical proximo-ventral tubercles and a series of small rounded tubercles on the ventral surface. Tibia with five retro-ventral and three pro-ventral spinous tubercles and a few small rounded tubercles on the ventral surface. Tarsus with three spinous tubercles on both pro- and retro-ventral surfaces.

Legs. Legs normal. Tarsal formula 4.14–16.4.4.



FIGS. 441-447 *Hendeola bullata* n.sp.
Fig. 441 Dorsal view of body; Fig. 442 Lateral view of eyemound; Fig. 443 Lateral view of male genitalia; Fig. 444 Pro-lateral surface male pedipalp; Fig. 445 Pro-lateral surface female pedipalp; Fig. 446 Male chelicera; Fig. 447 Female chelicera.

Measurements

Scute Length 2.55 Width 2.20

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.88	0.31	1.50	0.70	1.32	1.76	1.23	7.70
Leg 2 ..	1.32	0.40	2.24	0.75	2.20	2.20	2.60	11.71
Leg 3 ..	0.97	0.35	1.76	0.70	1.54	1.80	1.54	8.66
Leg 4 ..	1.41	0.40	2.02	0.79	1.80	2.28	1.80	10.50
Pedipalp ..		0.31	2.11	0.84	1.10		1.06	5.42
Chelicera ..	Basal	0.88	Second	1.23				2.11

Female. Structure of scute and eyemound as in male. Basal segment of the chelicerae with a small tubercle. Second segment without a proximo-dorsal process (Fig. 447). Pedipalps smaller than male, femur sloping, evenly curved on the dorsal surface, deeper mesially, with two elongate tubercles on the proximo-ventral and mid-ventral surfaces. Tibia and tarsus as in male, but first and third spines on the retro-ventral margin of the tibia small (Fig. 445). Tarsal formula 4.14–16.4.4.

Measurements

		Scute	Length	2.46	Width	2.23		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.66	0.26	1.19	0.62	1.14	1.50	1.10	6.47
Leg 2 ..	1.19	0.31	1.98	0.79	2.02	2.02	2.20	10.51
Leg 3 ..	1.06	0.40	1.50	0.66	1.41	1.76	1.23	8.02
Leg 4 ..	1.28	0.35	2.20	0.79	1.80	2.07	1.76	10.25
Pedipalp ..		0.26	1.19	0.66	0.88		0.79	3.78
Chelicera ..	Basal	0.75	Second	1.14				1.89

Types. Holotype male, Kitchener Park, Feilding, October 3, 1942, R. R. Forster (D.M.2/479); Allotype female, same data (D.M.2/481); Paratypes: Feilding Hills, October 1, 1948, R. R. Forster, 1 ♀ (D.M.2/500); West side of Tararuas, near Levin, June 13, 1948, A. C. O'Connor, 1 ♂ (C.M.A. 359); Levin, June 6, 1948, R. K. Dell, 1 ♀ (D.M.2/481).

Records. Ekatahuna, Wairarapa, date ? , C. L. Wilton, 1 ♂ (D.M.2/482).

Hendeola bullata pterna n.s.sp.

Figs. 448–452

Male

Colour. Body dark blackish-brown. Chelicerae and pedipalps pale-brown with black reticulate markings. Legs with alternate dark and light-brown bands.

Body. As in *bullata.*

Genitalia (Fig. 448). The aedeagus is similar in general structure to *bullata* but possesses a strong spinous process on sub-dorsal surface.

Chelicerae. Second segment differing from *bullata* as follows. The proximo-dorsal process is smooth, a series of small tubercles are present along the dorsal surface (Fig. 452).

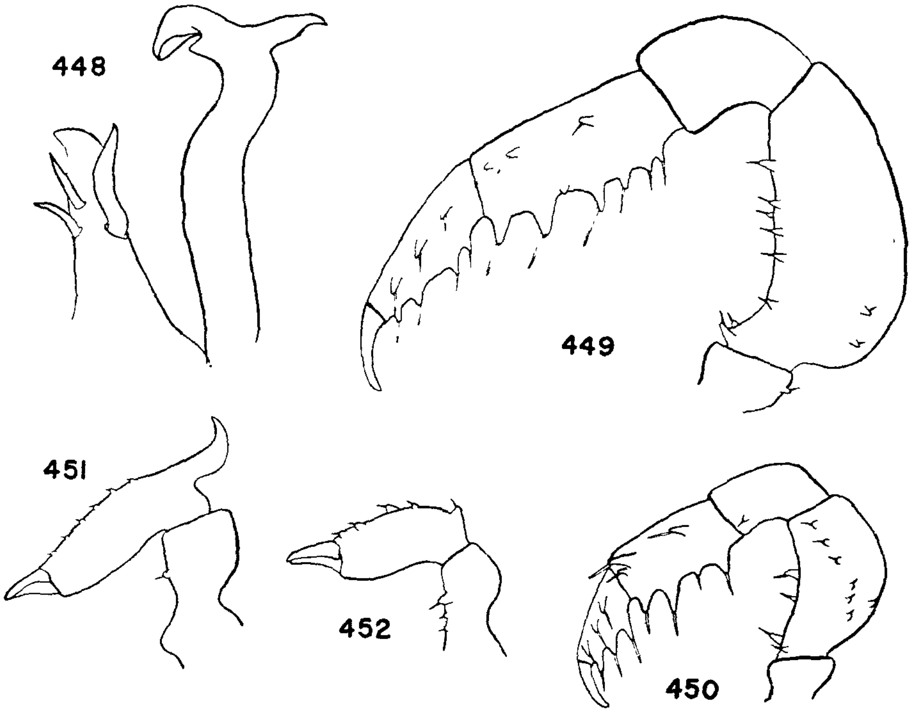
Pedipalps (Fig. 449). Similar in structure with *bullata* but with only two small denticulate tubercles on the proximal pro-dorsal surface of the femur, six spinous tubercles along the retro-ventral margin of the tibia and four along the retro-ventral margin of the tarsus.

Legs. As in *bullata.* Tarsal formula 4.14–16.4.4.

Measurements

		Scute	Length	2.20	Width	1.85		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.53	0.22	1.01	0.48	0.75	0.88	0.75	4.62
Leg 2 ..	0.92	0.26	1.54	0.66	0.92	1.54	1.41	7.25
Leg 3 ..	0.75	0.31	1.23	0.53	0.88	1.10	0.88	5.68
Leg 4 ..	0.92	0.26	1.41	0.62	1.19	1.32	1.06	6.78
Pedipalp ..		0.30	1.40	0.66	0.88		0.84	4.08
Chelicera ..	Basal	0.75	Second	0.97				1.72

Female. The process on the proximo-dorsal surface of the second segment of the chelicera is reduced to a small tubercle. The remaining tubercles on the dorsal surface of the second segment and on the ventral surface of the basal segment are relatively stronger than in male (Fig. 452). The pedipalps are similar in structure to those of the female of *bullata* but with a series of small tubercles on the pro-lateral surface of the femur as shown in Fig. 450.



FIGS. 448-452 *Hendeola bullata pterna* n.s.sp.

Fig. 448 Male genitalia; Fig. 449 Pro-lateral surface male pedipalp; Fig. 450 Pro-lateral surface female pedipalp; Fig. 451 Male chelicera; Fig. 452 Female chelicera.

Measurements

		Scute	Length	1.98	Width	1.80		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.48	0.18	0.79	0.44	0.66	0.84	0.62	4.01
Leg 2 ..	0.84	0.22	1.19	0.57	1.01	0.92	1.10	5.85
Leg 3 ..	0.66	0.26	0.97	0.44	0.84	0.97	0.84	4.98
Leg 4 ..	0.88	0.22	1.19	0.57	1.10	1.32	1.01	6.29
Pedipalp ..		0.21	0.70	0.31	0.53		0.48	2.23
Chelicera ..	Basal	0.40	Second	0.62				1.02

Types. Holotype male, Waipoua, North Auckland, December 1950, C. Rawlings (C.M.A. 361); Allotype female, same data (C.M.A. 362); Paratypes: same data, 2 imm. (C.M.A. 363); Whangarei, December 1948, R. A. Cumber, 1 ♀ (C.M.A. 364); Karo Forest, Whangarei, June 8, 1929, E. Fairburn, 1 ♂, 1 ♀ (D.M.2/508); Waitakere Hills, Auckland, February 8, 1949, R. R. Forster, 2 ♂, 2 ♀ (C.M.A. 360); Titirangi, Auckland, December 2, 1950, T. E. Woodward, 1 ♂ (C.M.A. 365).

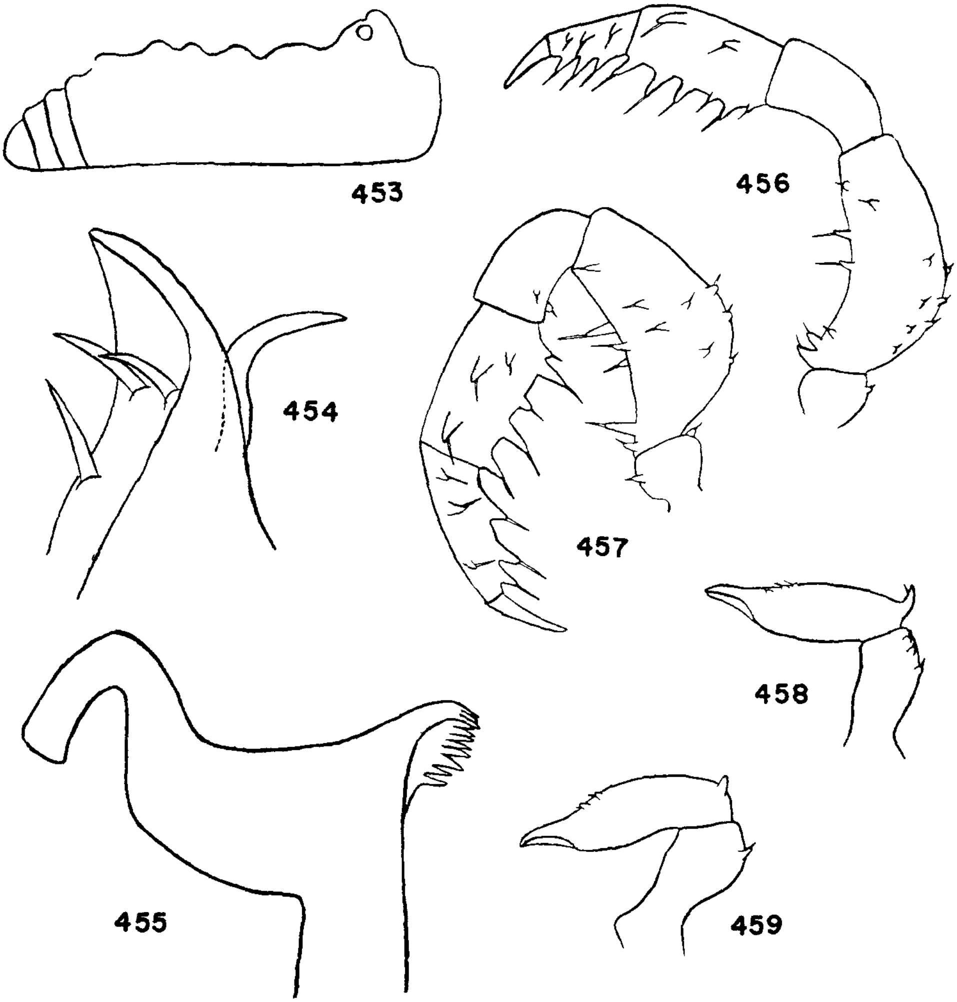
Hendeola woodwardi n.sp.

Figs. 453-459

Male

Colour. Ground colour, orange-brown, shaded with darker brown.

Body. The eyemound is twice as wide at the base as it is high and separated from the anterior margin of the carapace by a distance equal to its width. It is rounded,



FIGS. 453-459 *Hendeola woodwardi* n.sp.
Fig. 453 Lateral view of body; Fig. 454 Ventral plate of male genitalia; Fig. 455 Aedeagus; Fig. 456 Pro-lateral surface male pedipalp; Fig. 457 Pro-lateral surface female pedipalp; Fig. 458 Male chelicera; Fig. 459 Female chelicera.

with a low, broad apical prominence immediately in front of the eyes (Fig. 453). The surface of the scute is coriaceous. There are two strong spinous tubercles on each anterior corner of the carapace. The scutal groove is distinct and extends to the lateral margins of the scute. Faint grooves separate the tergal areas of the scute. Areas 1–4 with low mounds on the median surface, 2,3,4,6 in number respectively. Maxillary lobes of coxae 4 smooth.

Genitalia. Apical portion of aedeagus as shown in Fig. 455, apical duct projecting forward and with a pectinate process on the opposing surface. Ventral plate with three strong inferior setae and a sickle-shaped superior seta as shown in Fig. 454.

Chelicerae. As shown in Fig. 458. There are small tubercles on the disto-dorsal surfaces of both basal and second segment, and a strong simple spinous process on the proximo-dorsal surface of the second segment.

Pedipalps (Fig. 456). Trochanter with a small tubercle on both dorsal and ventral surfaces. Femur with a number of small tubercles on the proximal half of the dorsal surface, two elongate conical tubercles on both proximo- and mid-ventral surfaces. There are six tubercles along the retro-ventral margin of the tibia, first and third small, and two on the pro-ventral margin. Tarsus with three tubercles on both pro- and retro-ventral margins.

Legs. All segments except tarsi with small granules, more prominent on femora. Tarsal formula 4.12–16.4.4.

Measurements

		Scute	Length	2.64	Width	2.42		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.62	0.31	1.45	0.70	1.32	1.84	1.19	7.43
Leg 2 ..	1.10	0.40	2.38	0.88	2.20	2.86	3.22	13.04
Leg 3 ..	0.92	0.35	1.80	0.66	1.54	2.07	1.54	8.88
Leg 4 ..	1.19	0.48	2.02	0.92	2.02	2.99	2.07	11.69
Pedipalp ..		0.44	1.36	0.66	0.88		0.75	4.09
Chelicera ..	Basal	0.75	Second	1.23				1.98

Female. Similar in general structure to male. The pedipalp differs in a number of minor characters relative to the number and the relative size of tubercles as shown in Fig. 457. There is a single small tubercle on the disto-dorsal surface of the basal segment of the chelicerae and the spinous process on the proximo-dorsal surface of the second segment is reduced in size as shown in Fig. 459. Tarsal formula 4.14–15.4.4.

Measurements

		Scute	Length	2.64	Width	2.60		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.75	0.26	1.54	0.62	1.32	1.54	0.88	6.91
Leg 2 ..	1.19	0.40	2.07	0.88	2.02	2.46	2.68	11.70
Leg 3 ..	0.92	0.39	1.98	0.66	1.54	1.98	1.37	8.84
Leg 4 ..	1.23	0.48	1.99	0.92	1.98	2.64	1.58	10.82
Pedipalp ..		0.31	1.10	0.66	0.66		0.62	3.35
Chelicera ..	Basal	0.79	Second	1.32				2.11

Types. Holotype male, Titirangi, Auckland, December 2, 1950, T. E. Woodward (C.M.A. 357); Allotype female, same data (C.M.A. 358): Paratype female, same data (D.M.2/478).

Genus *PRASMA* Roewer, 1931

1920 *Monoxyomma* (Part), Hogg, Proc. Zool. Soc. London, p.44
1931 *Prasma*, Roewer, Zeits. f. zool., 138(1), p.168
1931 *Triaenobletus*, Roewer, Zeits.f.zool., 138(1), p.172

Eyemound separated from the anterior margin of the carapace by a distance equal to its diameter and armed with an apical tubercle. Anterior margin of the carapace armed with tubercles. Scute covered with small pustules, not arranged in an enclosed pattern. Areas 1–4 with or without a median pair of small tubercles. Posterior margin of scute and free tergites provided with a transverse row of tubercles. Genital operculum smooth. Legs unarmed. Calcaneus much smaller than astragalus. Tarsal segment with or without sexual dimorphism, Tarsal formula 3-4.6-11.4.4. Pedipalps of males usually stronger than females. Side branches of claws of legs 3 and 4 much shorter and weaker than median prong.

Genotype (monotypy) *Monoxyomma tuberculata* Hogg 1920

Hogg (1920), when describing *tuberculata*, stated that his material consisted of three male specimens and two females. Roewer (1931), in his revision of Hogg's material, ascertained that the five specimens consisted of three adult specimens which he determined as males, and two sub-adults. I have examined one of these adult specimens and find that this specimen and presumably the remaining two are females. Roewer in his revision also established a genus *Triaenobletus* which differed from *Prasma* by having four segments to tarsus 1 in contrast to the three of *Prasma*. It is now evident that Roewer was dealing with the male and female of *tuberculata*, which features this dimorphism, and thus *Triaenobletus* is now placed in synonymy with *Prasma*.

Prasma tuberculata (Hogg, 1920)

1920 *Monoxyomma tuberculata* Hogg, Proc. Zool.Soc. London, p.44
1931 *Prasma tuberculata* (Hogg), Roewer, Zeits. f.zool., 138(1), p.168
1931 *Triaenobletus crassipalpus* Roewer, Zeits.f.zool., 138(1), p.173

Figs. 459–463

Male

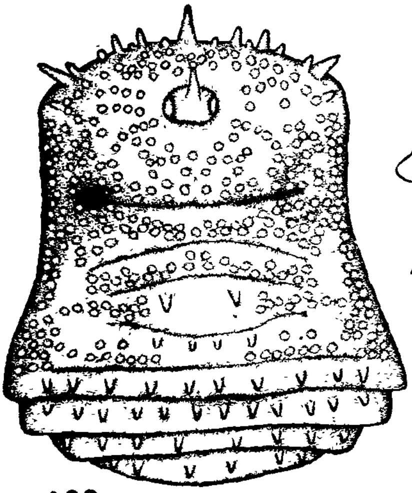
Colour. The general colour is orange-brown with darker shading on the mid-lateral and posterior surfaces of the scute. The free tergites and the sternites are shaded with black. Legs with faint black bands.

Body. The eyemound is separated from the anterior margin of the carapace by a distance equal to its width, provided with a slender apical spine which is equal to five-sevenths of the height of the eyemound. Anterior margin of the carapace with 11 conical tubercles, median and lateral strongest, and four smaller rounded tubercles, as shown in Fig. 459. There is a small conical tubercle behind each anterior corner. Scute with numerous pustules which are not contiguous and do not form a distinct pattern (Fig. 459). Scutal groove distinct. Tergal areas defined by transverse grooves, limited to the median surface. Area 3 with two, Area 4 with four small conical tubercles. Posterior surface of the scute and the free tergites with a transverse row of small conical tubercles. Sternites and genital operculum smooth.

Genitalia. The shape of the aedeagus is shown in Figs. 460, 461; it is provided with a short tube on the disto-ventral surface. The ventral plate entire, with a shallow antero-median notch, armed with two groups of three superior and four inferior setae.

Chelicerae. Basal segment with a small, sharp, mid-retro-dorsal and disto-dorsal tubercle. Second segment with two proximo-dorsal and one mid-dorsal tubercles.

Pedipalps (Fig. 462). Trochanter with a prominent slender spinous tubercle on the ventral surface. The femur is stout with a number of spinous tubercles on the dorsal surface and a strong compound tubercle on the proximo-ventral surface formed by the fusion of three tubercles. In addition to numerous small rounded tubercles on the ventral surface there are seven stronger conical tubercles, 2 proximal-pro-ventral tubercles, five retro-ventral. There are two stout tubercles on the pro-lateral surface of the patella, one median, one distal in position. Tibia with small tubercles on the ventral surface, both tibia and tarsus with three spinous tubercles



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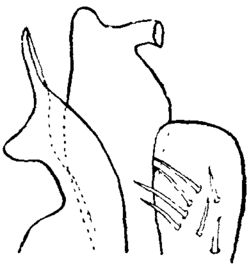

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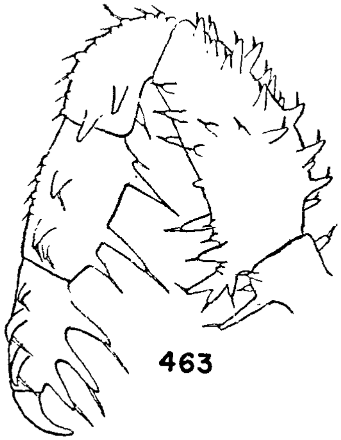

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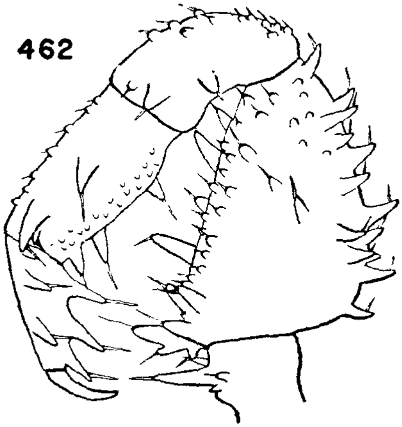

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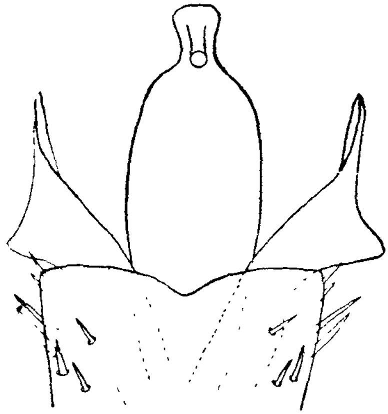


FIGS. 460-463 *Prasma tuberculata* (Hogg)

Fig. 460 Dorsal view of body of male; Fig. 461 Lateral view of male genitalia; Fig. 461a Ventral view of male genitalia; Fig. 462 Pro-lateral surface of male pedipalp; Fig. 463 Pro-lateral surface of female pedipalp.

on pro- and retro-ventral surfaces. The third pro-ventral tubercle of the tibia and first pro-ventral of the tarsus small.

Legs. There is a strong bifid tubercle on the disto-ventral surface of coxa 1 and a single median tubercle. The legs are sparsely granulate. Tarsal formula 4.10.4.4.

Measurements

		Scute	Length	3.52	Width	3.74		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.14	0.44	1.85	0.88	1.76	2.11	0.97	9.15
Leg 2 ..	1.98	0.57	3.08	0.97	3.26	4.35	1.80	16.04
Leg 3 ..	1.54	0.62	2.73	0.89	2.02	3.30	1.10	12.20
Leg 4 ..	1.98	0.66	3.52	0.90	3.08	4.79	1.32	16.25
Pedipalp ..		0.44	2.20	0.88	1.41		1.01	5.94
Chelicera ..	Basal	0.88	Second	1.45				2.33

Female. The pustules on the scute are relatively smaller and more numerous. The tergal areas are less clearly defined. The femur of the pedipalp is more slender (Fig. 463). A single tubercle is present on the proximal-pro-ventral surface. Tubercles of patella, tibia and tarsus more slender. Tarsal formula 3.6–9.4.4.

Measurements

		Scute	Length	3.70	Width	3.96		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.32	0.48	1.85	0.88	1.54	1.85	0.79	8.71
Leg 2 ..	1.76	0.53	3.30	1.06	3.30	4.17	1.76	15.88
Leg 3 ..	1.54	0.62	2.46	0.97	2.20	3.30	1.10	12.19
Leg 4 ..	1.98	0.66	3.21	1.01	2.73	4.79	1.32	15.70
Pedipalp ..		0.44	1.85	0.70	1.14		0.97	5.10
Chelicera ..	Basal	0.88	Second	1.32				2.20

Types. Five syntypes, 3 females ? , 2 immature, Mount Algidus, Rakaia Gorge (British Museum, Natural History, London) (1 female seen).

Records. Hawdon Valley, May 22, 1950, B. Wisely, 1 male (C.M.A. 880); Okuku Pass, April 23, 1950, R. R. Forster, 1 imm. (C.M.A. 879); Lake Taylor, April 14, 1952, R. R. Forster, 1 ♀ (C.M.A. 878); Lake Janet, Mount Grey, July 31, 1949, R. R. Forster, 1 ♀, 2 imm. (C.M.A. 877); Lake Rubicon, November 19, 1950, R. R. Forster, 1 ♀ (C.M.A. 876). Akaroa, 1 ♂, Roewer Coll. No. 1292/34.

Remarks. There is little doubt that *Triaenobletus crassipalpus* Roewer is the male of this species, the only species which occurs near Akaroa, the locality of Roewer's type specimen. I have examined one of Hogg's three adult specimens, which Hirst (Roewer, 1931) determined as males among Hogg's type material. This specimen is a female and I have no doubt that as sexual dimorphism is very striking in this species, the remaining two specimens not seen are of the same sex.

Prasma tuberculata mulsa n.s.sp.

Figs. 464–468

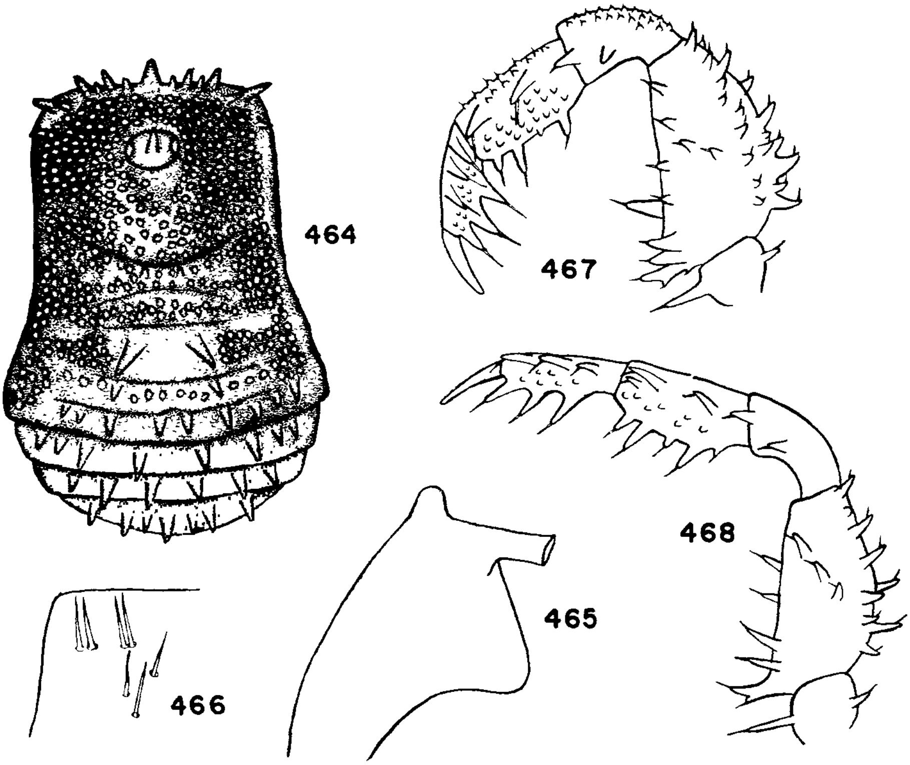
Male

Colour. General colour orange-brown with dark shading on the lateral margins of the scute.

Body. The eyemound is twice as wide as it is high, apical spine strong, of greater length than the eyemound proper, removed from the anterior margin of the carapace by a distance slightly less than the width of the eyemound. The anterior and lateral margins of the carapace are armed with short stout spinous processes as shown in Fig. 464 which are similar in number and size to *tuberculata*. The carapace and the lateral and anterior surfaces of the tergal region are closely covered with pustules. The scutal groove is distinct. There are grooves present separating the tergal areas. Areas 1 and 4 with a median pair of small tubercles, Area 3 with a median pair of strong spinous tubercles which are equal in height to one and half times the height of the eyemound proper. The posterior margin of the scute and the free tergites are armed with a transverse row of strong spinous tubercles (Fig. 464).

Genitalia. Similar in structure to *tuberculata* but the disto-ventral surface of the aedeagus is swollen (more sharply so than in *intermedia*) (Fig. 465). Ventral plates entire, setae situated as shown in Fig. 466.

Chelicerae. Basal segment with two small tubercles, one mid-retro-dorsal and one disto-dorsal in position. Second segment with two dorsally placed tubercles, one proximal, one median.



FIGS. 464-468 *Prasma tuberculata mulsa* n.s.sp.

Fig. 464 Dorsal view of body of male; Fig. 465 Lateral view, aedeagus of male genitalia; Fig. 466 Ventral plate; Fig. 467 Pro-lateral surface male pedipalp; Fig. 468 Pro-lateral surface female pedipalp.

Pedipalps. As shown in Fig. 467, with six tubercles on the retro-ventral surface of the femur, median two small and closely spaced, second and fifth largest.

Legs. Normal. Tarsal formula 4.9.4.4.

Measurements

Scute Length 3.34 Width 3.48

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.14	0.53	1.89	0.88	1.63	1.85	0.84	8.76
Leg 2 ..	1.85	0.57	3.17	0.97	3.21	3.92	1.76	15.45
Leg 3 ..	1.58	0.53	2.55	0.88	2.20	2.90	0.92	11.56
Leg 4 ..	2.16	0.54	3.12	0.97	2.73	4.57	0.88	14.97
Pedipalp ..		0.44	1.94	0.88	1.32		1.06	5.64
Chelicera ..	Basal	0.57	Second	1.28				1.85

Female. Similar to male in general structure. Pedipalp as in Fig. 468. Tarsal formula 3.9.4.4.

Measurements

Scute Length 3.39 Width 3.56

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.97	0.44	1.63	0.75	1.36	1.58	0.70	7.43
Leg 2 ..	1.54	0.44	2.51	0.92	2.73	3.78	1.76	13.68
Leg 3 ..	1.41	0.62	2.02	0.88	1.98	2.82	0.88	10.61
Leg 4 ..	1.76	0.66	3.08	0.93	2.64	4.13	0.88	14.08
Pedipalp ..		0.31	1.98	0.97	1.32		0.97	5.55
Chelicera ..	Basal	0.66	Second	1.50				2.16

Types. Holotype male, Meads Landing, Lake Hawea, January 21, 1951, R. R. Forster (C.M.A. 861); Allotype female, same data (C.M.A. 862): Paratypes: same data, 4 ♀ (C.M.A. 863, D.M.2/873).

Remarks. The more closely pustulate surface of the carapace and the much more strongly developed spines on Area 2 clearly separate this sub-species from *tuberculata.*

Prasma tuberculata mearosa n.s.sp.

Figs. 469–470

Female

Colour. Pale orange-brown.

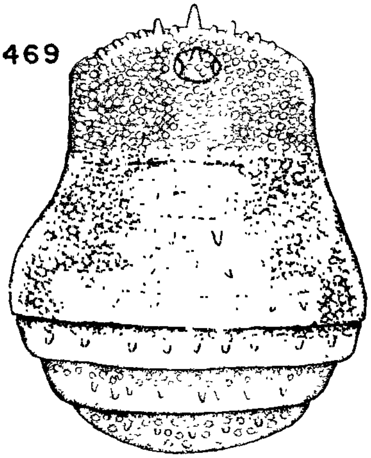
Body. The eyemound is twice as wide as it is high, armed with a short apical spine. which is slightly more than half the height of the eyemound proper, and is removed from the anterior margin of the carapace by a distance equal to four-fifths of the width of the eyemound. Apart from the posterior surface the scute is closely covered with small pustules. The scutal groove is restricted to the median surface (Fig. 469). There are two faint median grooves separating Area 3 and a more definite groove separating Areas 4 and 5. Areas 2–4 are armed with a small median pair of tubercles, smaller on Area 2. Posterior margin of the scute and the three free tergites with a transverse row of small conical tubercles.

Chelicerae. Basal segment with a strong disto-dorsal tubercle.

Pedipalps. Slender, provided with tubercles as in Fig. 470.

Legs. Tarsal formula 3.8–9.4.4.

469



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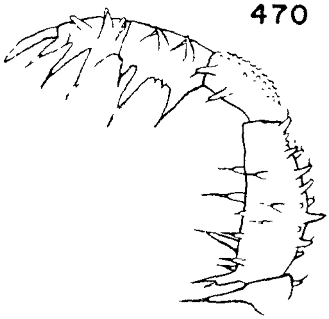


Figs. 469-470 *Prasma tuberculata mearosa* n.s.sp.
Fig. 469 Dorsal view of body of female; Fig. 470 Female pedipalp.

Measurements

		Scute	Length	3.08	Width	3.00		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	1.10	0.44	1.32	0.66	1.14	1.32	0.53	6.51
Leg 2	1.63	0.48	2.55	0.75	2.42	3.08	1.32	12.23
Leg 3	1.32	0.44	2.02	0.70	1.50	2.42	0.97	9.37
Leg 4	1.58	0.62	2.64	0.79	2.02	3.39	1.10	12.14
Pedipalp		0.35	1.76	0.66	1.10		0.75	4.62
Chelicera	Basal	0.53	Second	1.23				1.76

Types. Holotype female, Feilding, November 6, 1952, R. R. Forster (C.M.A. 873); Paratype, same locality, December 26, 1949, R. R. Forster, 1 ♀ (D.M.2/874);

Records. Dannevirke, September 11, 1942, R. R. Forster, 1 ♀ (D.M.2/878); Paekakariki, August 13, 1922, J. G. Myers, 1 ♀ (D.M.2/877); Orongorongo, December 29, 1920, J. G. Myers, 6 ♀ (D.M.2/875); Wilton's Bush, Wellington, March 2, 1920, R. E. R. Grimmett, 1 ♀ (D.M.2/876); Wellington, January, 1946, H. R. Hogg, 1 ♀ (C.M.A. 874).

Remarks. The small tubercles on both the scute and free tergites and the slender pedipalp separates this sub-species from both *tuberculata* and *mulsa.*

Prasma tuberculata intermedia n.s.sp.

Figs. 471–474

Male

Colour. As in *tuberculata.*

Body. The eyemound is wider than it is high in the ratio of 10:7. Apical spine equal to two-thirds of the height of the eyemound proper, which is removed from the anterior margin of the carapace by a distance equal to one and a quarter times the width of the eyemound. The tubercles on the anterior margin of the carapace are more numerous than in *tuberculata* (Fig. 471), with three strong tubercles on the median surface. The entire scute is closely covered with pustules. The scutal grooves and the tergal grooves are distinct. Areas 3 and 4 with a median pair of spinous tubercles, stronger on Area 3. The posterior margin of the scute and the free tergites with a transverse row of somewhat rounded tubercles.

Genitalia. Similar in general form with *tuberculata.* The aedeagus is relatively stouter, with a prominent swelling on the disto-ventral surface (Fig. 472).

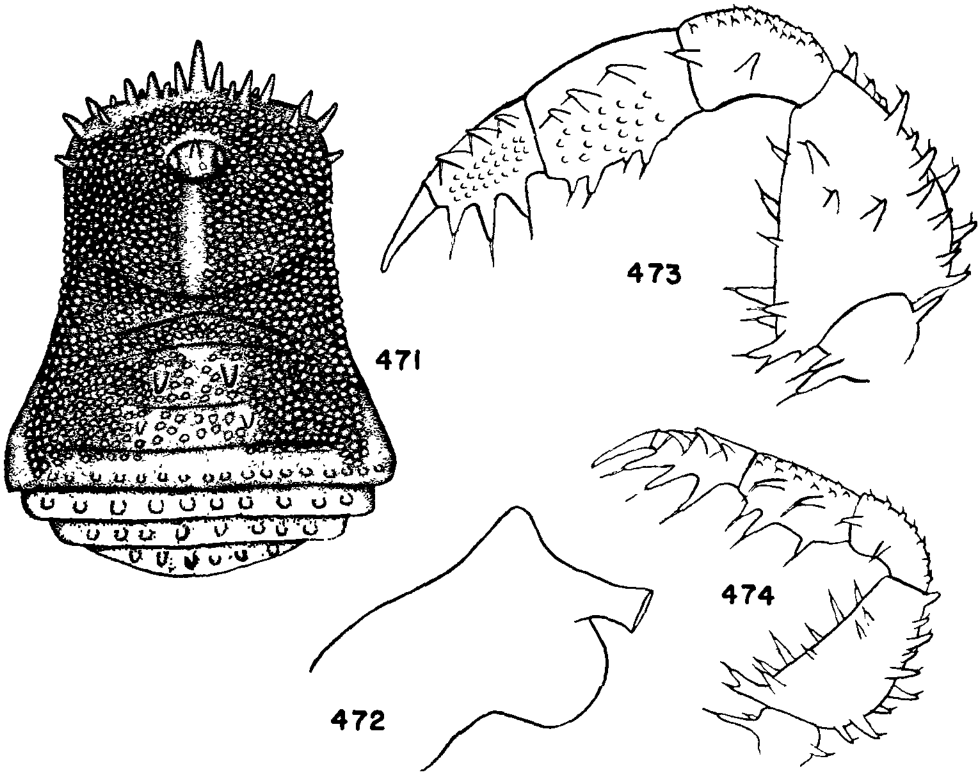
Chelicerae. Basal segment with a small disto-dorsal tubercle. The proximal surface of the second segment is swollen and provided with a small tubercle. There is a further similar tubercle present on the mid-dorsal surface.

Pedipalps. Differing only slightly from *tuberculata* as shown in Fig. 473.

Legs. Coxae provided with a few tubercles as in *tuberculata.* Legs otherwise only sparsely granulate. Tarsal formula 4.9.4.4.

Measurements

		Scute	Length	6.78	Width	3.74		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	0.88	0.53	2.07	0.93	1.85	1.98	0.75	8.99
Leg 2	2.20	0.57	3.52	0.97	3.52	4.35	1.54	16.67
Leg 3	1.76	0.62	2.73	1.01	2.20	3.30	1.06	12.68
Leg 4	2.24	0.88	3.30	1.10	2.21	4.79	1.14	15.66
Pedipalp		0.70	2.20	1.50	1.54		1.32	7.26
Chelicera	Basal	0.70	Second	1.32				2.02



FIGS. 471-474 *Prasma tuberculata intermedia* n.s.sp.
Fig. 471 Dorsal view of body of male; Fig. 472 Aedeagus of male genitalia; Fig. 473 Pro-lateral surface of male pedipalp; Fig. 474 Pro-lateral surface of female pedipalp.

Female. Similar in general structure with male. The apical spine of the eyemound is relatively smaller and the pustules on the scute are smaller. The pedipalps are more slender and appear as in Fig. 474. Tarsal formula 3.9–10.4.4.

Measurements

		Scute	Length	3.08	Width	3.65		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.88	0.48	1.98	0.88	1.36	1.63	0.70	7.91
Leg 2 ..	1.76	0.53	3.08	0.88	2.73	3.52	1.41	13.91
Leg 3 ..	1.54	0.44	2.42	0.70	1.80	2.20	1.01	10.11
Leg 4 ..	1.98	0.55	3.08	0.71	2.29	4.13	1.10	13.84
Pedipalp ..		0.44	1.76	0.86	1.10		1.09	5.25
Chelicera ..	Basal	0.66	Second	1.23				1.89

Types. Holotype male, Stephen Island, January 16, 1922, coll. ? (C.M.A. 864); Allotype female, same data (C.M.A. 865).

Records. Canaan, N.W. Nelson, November, 1951, A. C. O'Connor, 2 ♀ (C.M.A. 866); Maitai Valley, Nelson, October, 1948, A. W. Parrott, 1 ♀ (C.M.A. 867); Flora Track, Mount Arthur District, February 12, 1946, E. S. Gourlay, 1 ♀ (D.M.2/880); Flora Hut, January 20, 1948, R. K. Dell, 2 ♀ (C.M.A. 868); same locality, January 22, 1948, R. R. Forster, 1 ♀ (D.M.2/879); same locality, February 23, 1946, J. T. Salmon, 1 ♀ (D.M.2/882).

Remarks. The greater development of the spines on the anterior margin of the carapace and the rounded form of the tubercles on the posterior margin of the scute and the free tergites separate this sub-species from all other forms.

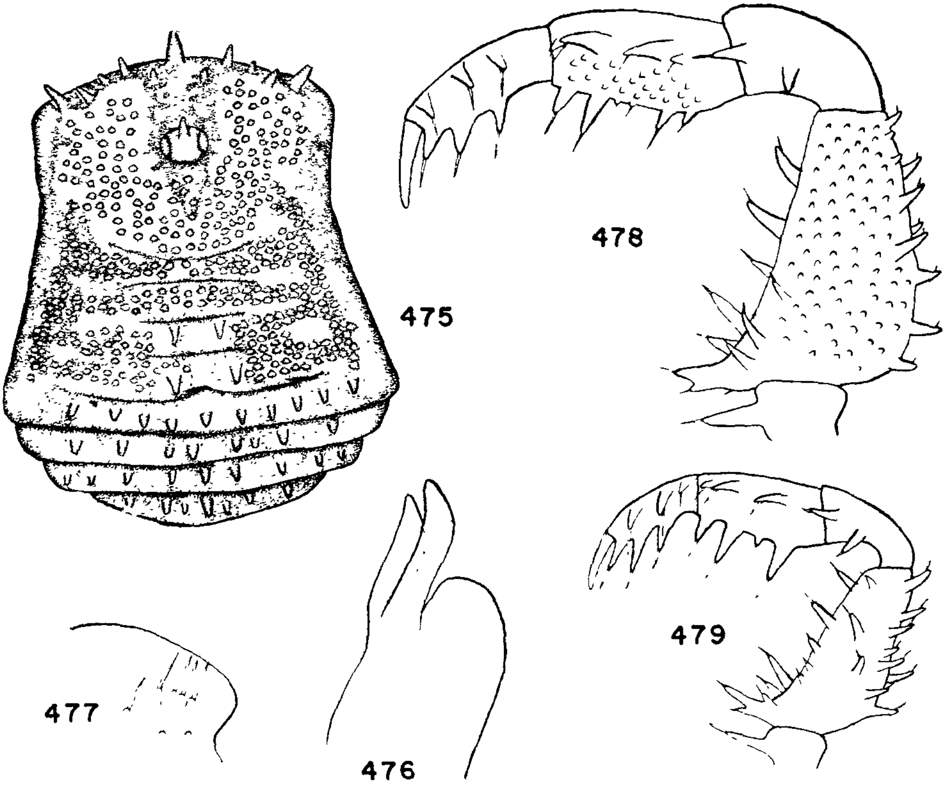
Prasma sorenseni n.sp.

Figs. 475–479

Male

Colour. General colour orange-brown with dark shading on the lateral margins of the scute and the median surface of the carapace.

Body. The eyemound is twice as wide as it is high, with a strong apical spine, which is equal in length to twice the height of the eyemound proper. The eyemound is removed from the anterior margin of the carapace by a distance equal to its diameter. The scute is covered with small pustules which are evenly spaced on the carapace but concentrated into tergal areas 1–4 on the tergal region. The anterior margin of the carapace is armed with nine well spaced spinous tubercles of which the median is stout but not longer than the laterals. (Fig. 475) The scutal groove is distinct. The tergal areas are distinguished by faint transverse grooves on the median surface. Areas 3 and 4 each with a pair of small spinous tubercles. The posterior margin



FIGS. 475-479 *Prasma sorenseni* n.sp.

Fig. 475 Dorsal view of body of male; Fig. 476 Aedeagus of male genitalia; Fig. 477 Ventral plate; Fig. 478 Pro-lateral surface of male pedipalp; Fig. 479 Pro-lateral surface of female pedipalp.

of the scute and the free tergites are armed with a transverse row of small conical tubercles.

Genitalia. Differing from *tuberculata* in possessing a pair of processes on the disto-ventral surface of the aedeagus as shown in Fig. 476. Ventral plate entire, seven setae present at each margin, as shown in Fig. 477.

Chelicerae. Basal segment with a small tubercle on the disto-dorsal surface. Second segment with two prominent proximo-dorsal tubercles and a single tubercle on the mid-dorsal surface in addition to a number of smaller more inconspicuous tubercles.

Pedipalps. As shown in Fig. 478. Tibia with four retro-ventral tubercles of which the second is small.

Legs. As in *tuberculata* but tarsal formula 3.9.4.4.

Measurements

		Scute	Length	3.70	Width	4.03		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.23	0.53	2.20	1.06	1.98	2.20	0.97	10.17
Leg 2 ..	1.98	0.62	3.92	1.14	3.70	5.27	1.98	18.61
Leg 3 ..	1.76	0.66	2.82	1.13	2.64	3.70	0.97	13.68
Leg 4 ..	2.20	0.79	4.13	1.10	3.12	5.45	1.32	18.11
Pedipalp ..		0.44	2.73	1.54	1.76		1.14	7.61
Chelicera ..	Basal	0.84	Second	1.45				2.29

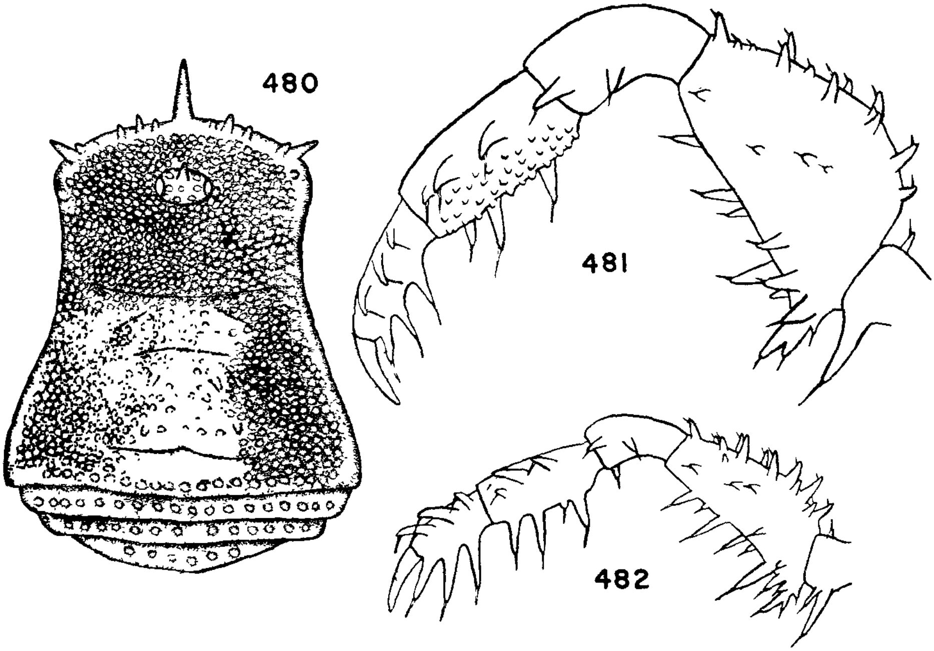
Female. Similar in appearance to male. Pedipalp more slender as shown in Fig. 479. Tarsal formula as in male 3.9.4.4.

Measurements

		Scute	Length	3.52	Width	3.74		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.06	0.48	1.89	0.88	1.76	2.11	0.92	9.10
Leg 2 ..	1.76	0.53	3.52	0.97	3.52	4.06	2.02	16.38
Leg 3 ..	1.54	0.53	2.64	0.88	2.20	2.33	1.10	11.22
Leg 4 ..	2.11	0.75	3.53	1.10	2.73	4.79	1.50	16.51
Pedipalp ..		0.48	1.89	0.92	1.36		0.97	5.62
Chelicerae	Basal	0.70	Second	1.32				2.02

Types. Holotype male, Orepuki, Southland, September 11, 1949, J. H. Sorensen (C.M.A. 844); Allotype female, same data (C.M.A. 845); Paratypes, same data, 2 ♀ (C.M.A. 846), same locality, May 7, 1949, R. R. Forster, J. H. Sorensen, 5 ♂, 7 ♀, 2 imm. (C.M.A. 847, D.M.2/868); same locality, January 3, 1949, J. H. Sorensen, 1 ♀ (C.M.A. 850).

Records. Pahia, Southland, May 20, 1949, J. H. Sorensen, 1 ♀ (C.M.A. 848); Morton Mains, Southland, January, 1951, R. Jenkin, 5 ♂, 4 ♀ (C.M.A. 849); Okarito, December 9, 1949, R. R. Forster, 9 ♀ (C.M.A. 851); Kumara, November, 1929, Coll. ? ?, 1 ♀ (C.M.A. 852); Reefton, March 25, 1920, W. L. Parham, 1 ♀ (C.M.A. 853); Wataroa, August, 1952, M. Warren, 2 ♀ (C.M.A. 855); Lower Fletcher Creek, Inangahua, January, 7 1952, W. Clark, 1 ♀ (C.M.A. 854); Lake Manapouri, February 6, 1946, R. R. Forster, 1 ♀ (D.M.2/859); Eglinton Valley, January 19, 1946, R. R. Forster, 16 ♀ (D.M.2/869, 2/872).



FIGS. 480-482 *Prasma sorenseni regalia* n.s.sp.
Fig. 480 Dorsal view of body of male; Fig. 481 Pro-lateral surface of male pedipalp; Fig. 482 Pro-lateral surface of female pedipalp.

Prasma sorenseni regalia n.s.sp.

Figs. 480–482

Male

Colour. Uniform orange-brown.

Body. The eyemound and apical spine are as in *sorenseni.* The carapace and the lateral margins of the tergal region are closely pustulate. The antero-median spine is strongly developed, much stronger than in *sorenseni* (Fig. 480). The tergal areas are less clearly defined, there being no groove separating Areas 3 and 4. Areas 3 and 4 each with a pair of small median tubercles. Posterior margin of the scute and the free tergites with a transverse row of small rounded tubercles.

Genitalia. As described for *sorenseni.*

Chelicerae. Basal segment with a single disto-dorsal tubercle. Second segment with a single small tubercle on the proximo-dorsal and mid-dorsal surfaces.

Pedipalps. Similar in general structure to *sorenseni* but femur not granulate (Fig. 481).

Legs. Tarsal formula 4.9.4.4.

Measurements

Scute Length 3.52 Width 3.96

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.32	0.44	2.20	0.88	1.80	2.29	0.88	9.81
Leg 2 ..	1.98	0.48	3.70	1.01	3.52	4.79	2.02	17.50
Leg 3 ..	1.50	0.53	2.86	0.88	2.42	3.52	0.97	12.68
Leg 4 ..	2.20	0.70	3.70	1.06	3.08	5.27	1.16	17.17

Pedipalp ..		0.57	2.46	1.32	1.58		1.50	7.43
Chelicera ..	Basal	0.88	Second	1.41				2.29

Female. Similar to male in general structure but pedipalps much more slender as shown in Fig. 482. Tarsal formula 3.9.4.4.

Measurements

		Scute	Length	3.08	Width	3.52		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.92	0.44	1.76	0.84	1.50	1.85	0.70	8.01
Leg 2 ..	1.58	0.44	3.52	0.70	3.08	4.13	1.76	15.21
Leg 3 ..	1.23	0.48	2.64	0.75	2.20	3.08	0.88	11.26
Leg 4 ..	1.98	0.53	3.52	0.92	2.64	4.79	1.23	15.61
Pedipalp ..		0.40	1.76	0.75	1.10		0.84	4.85
Chelicera ..	Basal	0.62	Second	1.23				1.85

Types. Holotype male, Royal Terrace, Dunedin, December 14, 1937, B. J. Marples, (C.M.A. 857); Allotype female, same data (C.M.A. 858).

Records. Warrington, Otago, 1900, Coll. ? (Otago Museum), 1 ♀; New Zealand date ? , 4 ♂, 1 ♀ (Otago Museum).

Remarks. The elongate spinous tubercle on the antero-median surface of the carapace, the more closely granulated scute and rounded tubercles on the posterior margin of the scute and the free tergites separate *regalia* from *sorenseni*.

Genus *PRASMIOLA* n.gen.

Eyemound rising from near the anterior margin of the carapace, sub-conical and tuberculate. Anterior margin of the carapace smooth. Scute with small pustules, not arranged in an enclosed pattern. Tergal areas not clearly defined. Posterior margin of the scute and the free tergites not armed with strong tubercles. Genital operculum smooth. Calcaneus much shorter than astragalus. Femur of leg 1 armed with tubercles on the ventral surface. Tarsal formula 8.19.4.4. Side branches of the claws of legs 3 and 4 much shorter and weaker than the median prong. Sexual dimorphism not known.

Genotype *Prasmiola unica* n.sp.

This genus is closely related to *Prasma* but is clearly separated from it by the more numerous tarsal segments of the first leg.

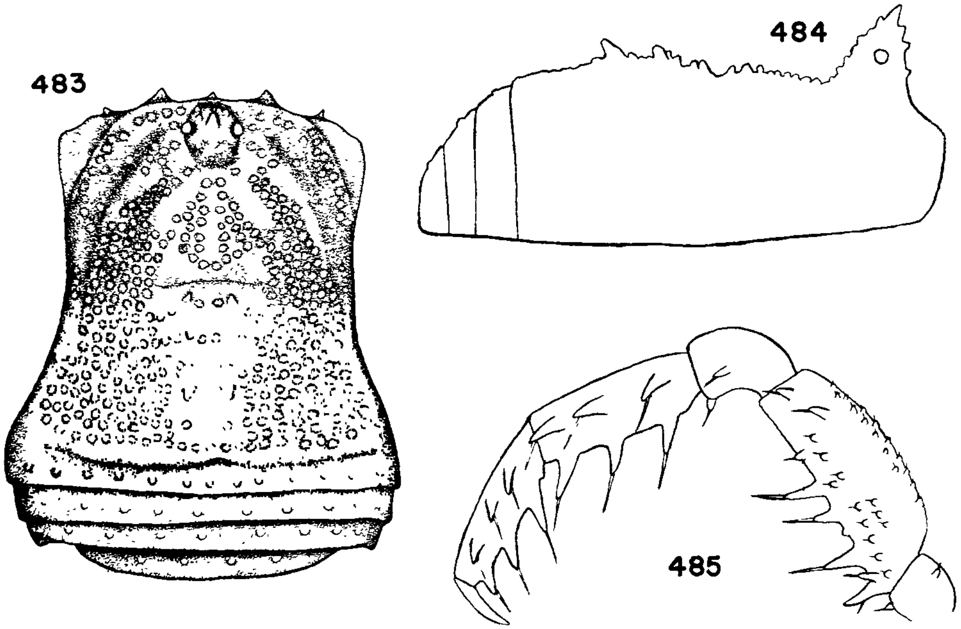
Prasmiola unica n.sp.

Figs. 483–485

Female

Colour. Pale orange-brown. Faint black reticulate markings present on the dorsal surfaces of the chelicerae and pedipalps.

Body. The eyemound is higher than it is wide, granulate, separated from the anterior margin of the carapace by a distance which is slightly less than half of the width of the eyemound and is provided with a short apical spine (Fig. 484). The anterior margin of the carapace is provided with three spinous projections on the median surface but lacks tubercles. The scute is covered with small pustules as shown in Fig. 483, more closely spaced on the lateral surfaces. Scutal groove visible on median surface. Faint transverse groove present separating Areas 2 and 3. Areas 1–3 each with a median pair of small tubercles. Posterior margin of the scute and the free



FIGS. 483-485 *Prasmiola unica* n.sp.
Fig. 483 Dorsal view of body of female; Fig. 484 Lateral view of body; Fig. 485 Prolateral surface female pedipalp.

tergites each with a single transverse row of granules. Maxillary lobes of coxae 2 smooth. Genital operculum smooth.

Chelicerae. Basal segment smooth, with a shallow proximo-dorsal furrow. Second segment with few small dorsal tubercles.

Pedipalps (Fig. 485). Slender. Femur with two rows of small tubercles along the dorsal surface and four somewhat elongate and strong tubercles on the proximal half of the ventral surface. There is a small accessory tubercle on the antero-basal surface of the proximal tubercle and a further small tubercle between the second and third. Pro-lateral surfaces with a number of small rounded tubercles in addition to two stronger conical tubercles on the distal surface. Patella with a single tubercle on both pro- and retro-lateral surfaces. Tibia and tarsus both with three spinous tubercles on pro- and retro-ventral surfaces.

Legs. There is a small bifid tubercle on the disto-ventral surface of coxa 1 and a small digitiform tubercle on the distal retro-lateral surface of coxa 2. Leg 1 with five conical tubercles on the ventral surface, one on trochanter, four on proximal surface of femur. Legs otherwise coarsely granulate. Tarsal formula 8.19.4.4.

Measurements		Scute	Length	3.43	Width	3.42		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.92	0.48	2.20	0.88	1.84	2.86	1.41	10.59
Leg 2 ..	1.58	0.57	3.52	1.10	3.30	4.79	3.08	17.94
Leg 3 ..	1.32	0.53	2.33	1.01	2.29	3.52	2.20	13.20
Leg 4 ..	1.63	0.62	3.17	1.23	3.08	4.80	2.38	16.91
Pedipalp ..		0.40	1.80	0.92	1.32		1.14	5.58
Chelicera ..	Basal	1.10	Second	1.19				2.29

Type. Holotype female, Days Bay, Wellington, February 19, 1942, R. R. Forster (D.M.2/477).

Remarks. This species is localised and apparently rare. Continuous searching in the type locality has failed to produce further material.

Genus *ALGIDIA* Hogg, 1920

1902 *Adaeum* (Part), Loman, Zool. Jahrb. Syst., 16, p.211
1920 *Algidia*, Hogg, Proc. Zool. Soc. London, p.46
1923 *Adaeum* (Part), Roewer, Die Weberknechte der Erde, p.622
1931 *Adaeum* (Part), Roewer, Zeits.f.zool. 138 (1), p.175
1931 *Algidia*, Roewer, Zeits.f.zool. 138 (1), p.181
1943 *Adaeum* (Part), Forster, Proc. Roy.Soc.N.Z., 73 (1), p.68

Eyemound armed with pustules or small tubercles, placed about its own width from the anterior margin of the carapace. Anterior margin of the carapace armed with strong spinous processes. Scute with numerous small pustules arranged in an enclosed pattern. Posterior margin of the scute and the free tergites each with a transverse row of tubercles. Genital operculum pustulate or tuberculate. Calcaneus very small, barely discernible. Tarsal formula 3.5–8.4.4. Lateral branches of claws 3 and 4 much smaller and weaker than median prong. Sexual dimorphism usually evident in the larger pedipalp of male and more complete dorsal pattern of the female. Male dimorphism not noted.

Genotype (monotypy) *Algidia cuspidata* Hogg, 1920

Roewer (1923), after examing the type material of *Adaeum nigriflavum* (Loman), retained the male specimen in *Adaeum* and transferred the females to *Nuncia*. Forster (1943) suggested that *Algidia* should be considered a synonym of *Adaeum*. However, further examination has shown that *Algidia* should be re-established and should include *Adaeum nigriflavum* (Loman) which does not have the broad sternum characteristic for *Adaeum*.

Key to the males of Algidia

1. Anterior margin of the carapace armed with three median spines 2
   Anterior margin of the carapace armed with more than three spines........... 8
2. Posterior margin of the scute with small rounded tubercles....................... 3
   Posterior margin of the scute with one or more strong spinous tubercles 4
3. Eyemound with three apical tubercles..............................*interrupta* n.sp.
   Eyemound rising to a single apical cone.................*interrupta solatia* n.s.sp.
4. Eyemound with a single apical spine, posterior margin of the scute with a single median spinous tubercle..*homerica* n.sp.
   Eyemound with two or more apical tubercles; posterior margin of the scute with numerous spinous tubercles.. 5
5. Dorsal pattern of scute with median longitudinal rows...........*marplesi* n.sp.
   Dorsal pattern without median longitudinal rows.................................... 6
6. Lateral rows of tergal pattern broken near scutal groove.........*chiltoni* Roewer
   Lateral rows entire 7
7. Femur of pedipalp with a stout spinous tubercle on the proximo-dorsal surface. Eyemound with strong apical tubercles......... *hoggi longispinosa* n.s.sp.
   Femur of pedipalp without strong tubercle on proximo-dorsal surface. Eyemound with small apical tubercles..............................*hoggi oconnori* n.s.sp.

8. Anterior margin of carapace with five spines....................*nigriflava* (Loman)
Anterior margin of the scute with seven or more spines 9
9. Predominantly green in coloration. Thirteen to fifteen tubercles on the anterior margin of the carapace 10
Predominantly brown in coloration. Seven tubercles on anterior margin of the carapace 11
10. Eyemound with three small apical tubercles.........................*viridata* n.sp.
Eyemound with slender, forwardly directed, apical spine......*viridata bicolor* n.s.sp.
11. Lateral row of scutal pattern not extending behind the scutal groove. Free tergites with numerous (16–18) closely spaced tubercles...........*cuspidata* Hogg
Lateral rows extending down the tergal region of the scute.
Tubercles on free tergites fewer than above (11–13) and more widely spaced ....:... *multispinosa* n.sp.

Algidia cuspidata Hogg, 1920

1920 *Algidia cuspidata* Hogg, Proc.Zool.Soc. London, p.47
1931 *Algidia cuspidata* Hogg, Roewer, Zeits.f.zool. 138 (1), p.181
1931 *Algidia akaroa* Roewer, Zeits.f.zool. 138 (1), p.183
Figs. 486–490

Male

Colour. General colour pale-brown, with black markings as shown in Fig. 486.

Body. The eyemound is small, as high as it is wide and separated from the anterior margin of the carapace by a distance equal to its diameter. Seven spines are present on anterior-median surface of the carapace and provided with from 4–6 small apical tubercles (Fig. 487), median strongest. There is a small tubercle on each anterior corner behind which are three similar tubercles. Dorsal pattern as shown in Fig. 486, lateral row extending to mid-way down the scute. Area 1 with two pairs, Areas 2–4 with one pair of small tubercles. Posterior margin of the scute and free tergites with a transverse row of small, spinous, closely spaced tubercles. Genital operculum with numerous small pustules distributed mainly along the anterior margin.

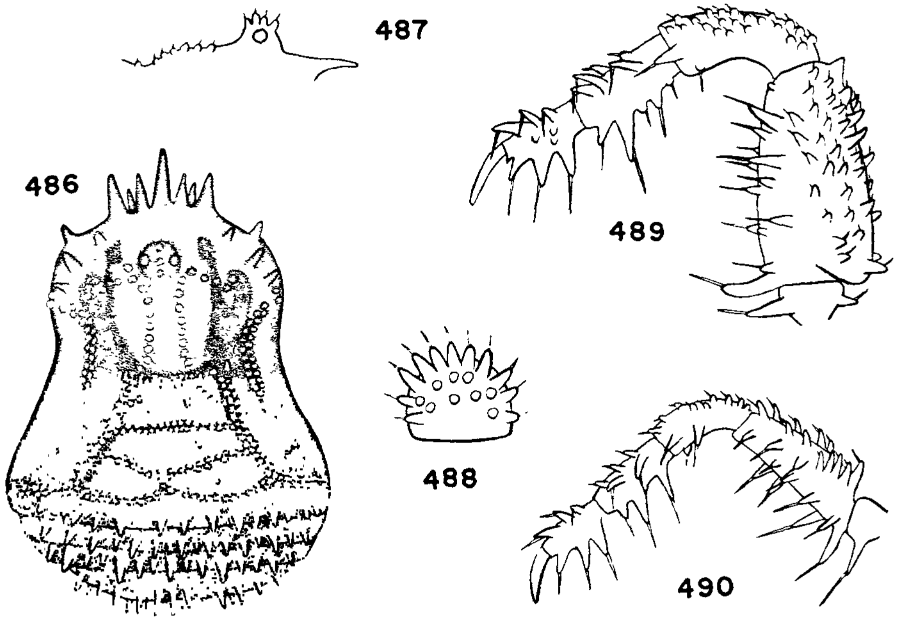
Pedipalps. The pedipalps are as shown in Fig. 489. The femur is relatively stout, proximo-dorsal surface swollen, with a small apical tubercle.

Legs. Weakly granulate. Tarsal formula 3.5–6.4.4.

Measurements

		Scute	Length	2.46	Width	2.55		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.62	0.26	1.19	0.57	0.92	0.92	0.31	4.79
Leg 2 ..	1.10	0.40	1.80	0.62	1.32	2.11	0.88	8.23
Leg 3 ..	0.97	0.31	1.41	0.53	1.23	1.89	0.53	6.87
Leg 4 ..	1.36	0.48	1.72	0.66	1.41	2.51	0.53	8.67
Pedipalp ..		0.26	1.36	0.79	0.62		0.48	3.51
Chelicera ..	Basal	0.35	Second	0.79				1.14

Female. Similar in general structure to male. The dorsal pattern is more clearly defined, the lateral row extends back to near the posterior margin of the scute. The pedipalps are slender and provided with numerous spinous tubercles as shown in Fig. 490.



FIGS. 486-490 *Algidia cuspidata* Hogg

Fig. 486 Dorsal view of body of male; Fig. 487 Lateral view of eyemound of male; Fig. 488 Genital operculum; Fig. 489 Pro-lateral surface male pedipalp; Fig. 490 Pro-lateral surface female pedipalp.

Measurements

		Scute	Length	2.46	Width	2.60		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.57	0.31	0.88	0.53	0.92	1.01	0.40	4.32
Leg 2 ..	0.97	0.40	1.63	0.53	1.32	1.98	0.88	7.71
Leg 3 ..	0.92	0.40	1.28	0.53	1.23	1.76	0.53	6.65
Leg 4 ..	1.36	0.48	1.98	0.57	1.41	2.55	0.66	9.01
Pedipalp ..		0.22	1.06	0.57	0.70		0.48	3.03
Chelicera ..	Basal	0.26	Second	0.66				0.92

Types. Syntypes, in British Museum, Natural History. 3 males, Mt. Algidus, Rakaia Gorge, 1 male, Mt. Remarkables near Lake Wakatipu, one syntype with following data in Canterbury Museum; Mount Algidus, November, 1912, H. Hall, 1 male (No. K. 16) (C.M.A. 773).

Records. Mount Algidus, February 11, 1946, R. R. Forster, 4 ♂, 2 ♀ (D.M.2/832); Lake Rubicon, Canterbury, November 19, 1950, R. R. Forster, 6 ♂, 5 ♀ (C.M.A. 784); Otarama, Canterbury, date ? , coll. ? , 1 ♂ (C.M.A. 788); Lake Janet, Mount Grey, July 31, 1949, R. R. Forster, 1 ♂ ,8 ♀ (C.M.A. 789); Okuku Pass, April 23, 1950, R. R. Forster, 3 ♂, 6 ♀ (C.M.A. 780); Chalk Hill, Oxford, November 4, 1951, R. R. Forster, 3 ♂, 3 ♀ (C.M.A. 794); Kennedy's Bush, Christchurch, February 30, 1946, R. R. Forster, 1 ♂ (D.M.2/848); Deans Bush, Christchurch, November 13, 1948, E. W. Dawson, 1 ♂ (C.M.A. 776); Kaituna Valley, Banks Peninsula, October 10, 1948, R. R. Forster, 1 ♂ (C.M.A. 779); same locality, February 11, 1949, R. R. Forster, 3 ♂, 4 ♀ (C.M.A. 792); Okuti Valley, Banks Peninsula, December 10, 1950, R. R. Forster, 1 ♀ (C.M.A. 781); Fishermans Bay, Akaroa, April 22, 1950, L. P. Hughson, 2 ♂ (C.M.A. 791); Little Fishermans

Bay, Akaroa, April 22, 1950, L. P. Hughson, 1 ♂ (C.M.A. 775); Paua Bay, Akaroa, April 23, 1950, L. P. Hughson, 1 ♀ (C.M.A. 777); Sleepy Cove, Akaroa, April 21, 1950, L. P. Hughson, 1 ♀ (C.M.A. 793); Mount Desmond, Banks Peninsula, April 26, 1950, L. P. Hughson, 1 ♂ (C.M.A. 778).

Remarks. The males and females described by Hogg belong to two distinct species. Roewer (1931) accepted the male specimens as belonging to this species and established a new species, *chiltoni*, for the female.

Algidia cuspidata multispinosa n.sp.

Figs. 491–495

Male

Colour. General colour yellowish-brown, with black shading on the inner margin of the lateral rows, posterior margin of the scute and free tergites.

Body. The eyemound is similar to *cuspidata* (Fig. 492). There are seven spines on the median anterior margin of the scute as in *cuspidata* but the median spine is stouter. There is an additional tubercle on the lateral margin of the carapace at about one-quarter of the length of the scute. The dorsal pattern is shown in Fig. 491. The lateral rows extend from about one-third of the length of the scute back to meet the posterior transverse row. There is a pair of elongate tubercles on the antero-median surface of the tergal region which are directed forward over the posterior margin of the carapace. The posterior margin of the scute and the free tergites are provided with spinous tubercles, similar in size and form to *cuspidata* but fewer in number (Fig. 491). There is a single row of from 9–11 small elongate pustules around the anterior margin of the genital operculum (Fig. 493).

Pedipalps. These are similar to *cuspidata*, differing slightly in the femur and patella as shown in Fig. 494.

Legs. As in *cuspidata*. Tarsal formula 3.6.4.4.

Measurements

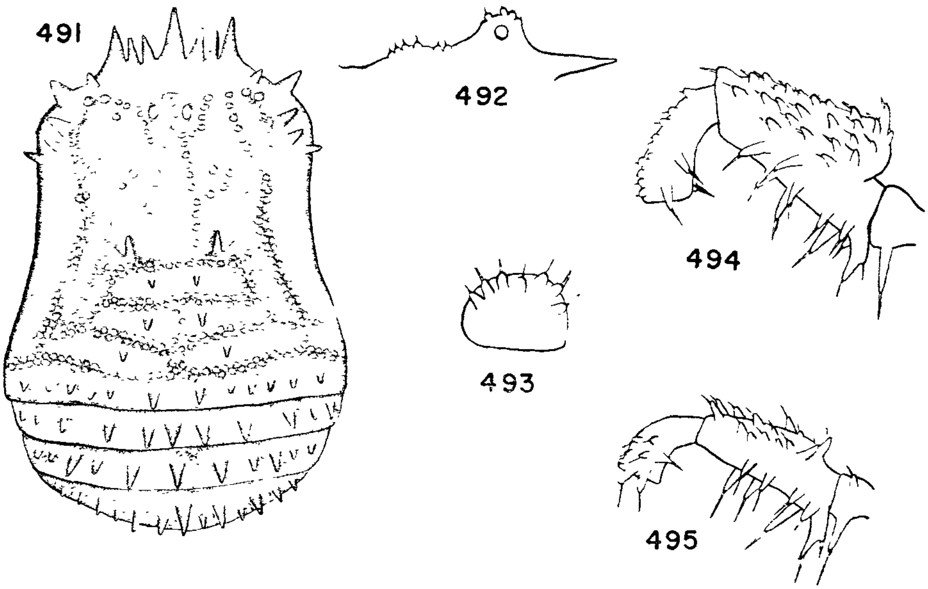
		Scute	Length	2.90	Width	3.08		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.66	0.31	1.54	0.66	1.36	1.45	0.48	6.46
Leg 2 ..	1.32	0.44	2.51	0.66	1.85	2.73	1.14	10.65
Leg 3 ..	1.32	0.40	1.80	0.70	1.76	2.38	0.57	8.93
Leg 4 ..	1.76	0.62	2.42	0.75	1.94	3.52	0.75	11.76
Pedipalp ..		0.31	1.80	1.06	1.28		0.70	5.15
Chelicera ..	Basal	0.44	Second	0.88				1.32

Female. Similar in appearance to the female of *cuspidata*, differing slightly on the ventral and pro-lateral surfaces of the femur of the pedipalps, as shown in Fig. 495.

Measurements

		Scute	Length	2.73	Width	2.82		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.62	0.31	1.19	0.62	0.97	1.58	0.48	5.77
Leg 2 ..	1.23	0.40	1.80	0.66	1.98	2.33	0.88	9.28
Leg 3 ..	1.10	0.40	1.54	0.57	1.41	1.85	0.66	7.53
Leg 4 ..	1.54	0.53	2.11	0.53	1.76	3.08	0.75	10.30
Pedipalp ..		0.22	1.23	0.66	0.75		0.48	3.34
Chelicera ..	Basal	0.35	Second	0.79				1.14

Types. Holotype male, Hanging Rock, Dunedin, August 22, 1939, B. J. Marples



FIGS. 491-495 *Algidia cuspidata multispinosa* n.s.sp.

Fig. 491 Dorsal view body of male; Fig. 492 Lateral view eyemound of male; Fig. 493 Genital operculum; Fig. 494 Pro-lateral surface male pedipalp; Fig. 495 Pro-lateral surface female pedipalp.

(C.M.A. 758); Allotype female, same data (C.M.A. 759); Paratypes: same data, 4 ♂, 8 ♀ (C.M.A. 760, D.M.2/828).

Records. Temuka, August 22, 1939, B. J. Marples, 1 ♀ (C.M.A. 783), Waihi, South Canterbury, December 11, 1939, A. W. Parrott, 6 ♂, 6 ♀ (C.M.A. 786); Waimate, date ? , B. J. Marples, 1 ♀ (C.M.A. 834); Kakahu, Geraldine, April 30, 1950, R. R. Forster, 5 ♂, 5 ♀ (C.M.A. 782); Geraldine Bush, December 11, 1939, A. W. Parrott, 1 ♂, 3 ♀ (C.M.A. 787); Peel Forest, January 20, 1951, R. R. Forster, 4 ♂, 2 ♀ (C.M.A. 785).

Remarks. This sub-species may be separated from *cuspidata* by the reduced number of tubercles on the posterior margin of the scute and the free tergites.

Algidia nigriflava (Loman, 1902)

1902 *Adaeum nigriflavum* Loman, Zool. Jahrb.Syst.16, p.211
1914 *Adaeum nigriflavum* Loman, Roewer, Arch. Naturg. 80A (12), p.146
1923 *Adaeum nigriflavum* Loman, Roewer, Die Weberknechte der Erde, p.622
1943 *Adaeum nigriflavum* Loman, Forster, Trans. Roy.Soc.N.Z., 73 (1), p.69

Figs. 496–500

Male

Colour. The general colour is a pale orange, with dark markings on the mid-lateral surface of the scute, the posterior margin and the free tergites.

Body. The eyemound is slightly wider than it is wide, provided with from 4–6 small tubercles along the median surface (Fig. 497) separated from the anterior margin of the carapace by a distance equal to half its diameter. Anterior margin of the carapace with five spines, median and lateral strong, and a small spine on each anterior corner of the carapace. There are four tubercles behind each anterior corner. The dorsal pattern as shown in Fig. 496, with lateral rows extending back to halfway. Areas 2–4 with a median pair of small rounded tubercles. Posterior margin of the scute and free tergites each with a transverse row of short, sharp tubercles, as shown in Fig. 496. Genital operculum with from 9–10 tubercles spaced evenly along the anterior margin (Fig. 498).

Chelicerae. Both segments with granules on the dorsal surface.

Pedipalps. Strongly tuberculate as shown in Fig. 499. Proximo-dorsal surface of the femur with a strong sharp tubercle.

Legs. Normal. Tarsal formula 3.6–7.4.4.

Measurements

		Scute	Length	2.29	Width	2.25		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.66	0.31	1.32	0.44	1.01	1.23	0.44	5.41
Leg 2 ..	1.19	0.35	1.94	0.66	1.85	2.42	1.10	9.51
Leg 3 ..	1.06	0.44	1.76	0.53	1.54	2.20	0.57	8.10
Leg 4 ..	1.32	0.44	2.38	0.70	1.72	3.08	0.66	10.30
Pedipalp ..		0.31	1.32	0.57	0.84		0.57	3.61
Chelicera ..	Basal	0.44	Second	0.66				1.10

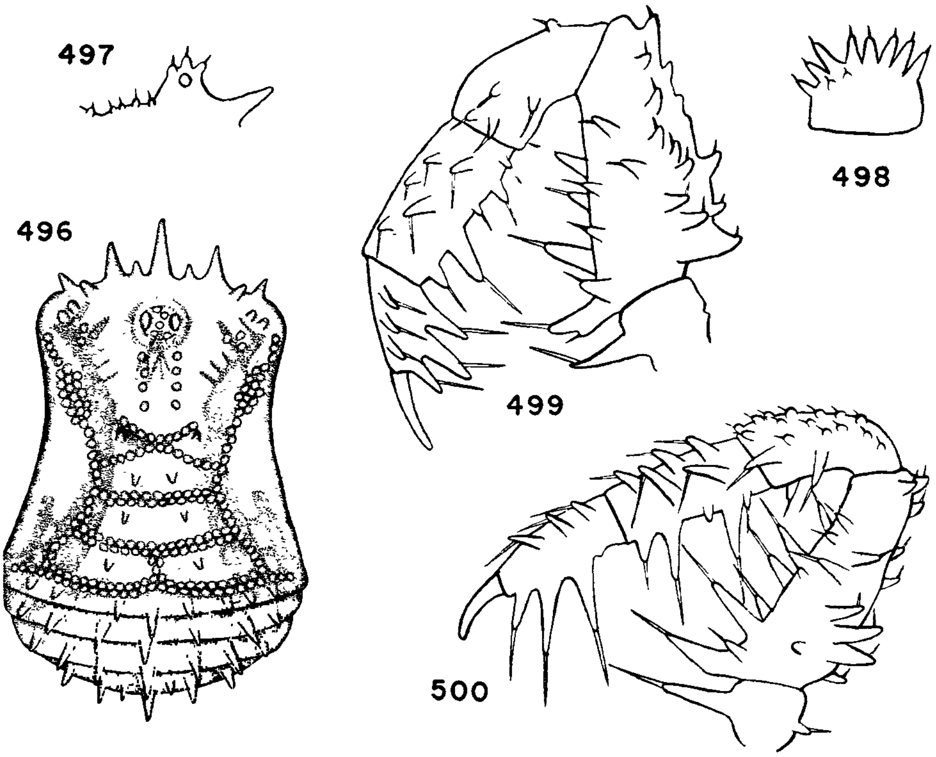
Female. The dorsal pattern is more clearly defined, lateral rows extend back to the posterior row and an additional row extends from the scutal groove diagonally forward to the anterior corner of the carapace. Pedipalp as shown in Fig. 500, more slender than male, tubercles mainly longer, lacking a strong tubercle on the proximo-dorsal surface of the femur.

Measurements

		Scute	Length	2.51	Width	2.60		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.53	0.22	1.32	0.48	0.97	1.01	0.48	5.01
Leg 2 ..	1.23	0.40	1.98	0.70	1.76	2.20	1.10	9.37
Leg 3 ..	0.92	0.44	1.72	0.48	1.36	1.98	0.44	7.34
Leg 4 ..	1.32	0.48	2.20	0.53	1.58	3.12	0.66	9.89
Pedipalp ..		0.31	1.14	0.48	0.66		0.53	3.12
Chelicera ..	Basal	0.88	Second	0.62				1.50

Types. Holotype male, Stephen Island (Berlin Museum) (Seen).

Records. Stephen Island, April 11, 1948, J. T. Salmon, 1 ♂, 1 ♀ (D.M.2/831); same locality, May 14, 1950, R. R. Forster, 1 ♂, 3 ♀ (C.M.A. 766); Inner Chetwode Island, September 12, 1948, R. K. Dell, 1 ♂ (D.M.2/834); Maitai Valley, Nelson, October, 1948, A. C. O'Connor, 1 ♂, 1 ♀ (C.M.A. 823); Pelorus Bridge, Marlborough, January, 1949, A. C. O'Connor, 2 ♂, 1 ♀ (C.M.A. 824); Days Bay, Wellington, June 28, 1942, R. R. Forster, 6 ♂, 5 ♀ (D.M.2/778); same locality, July 19, 1941, R. R. Forster, 1 ♂, 2 ♀ (D.M.2/783); Karori, Wellington, June 17, 1944, R. R. Forster, 2 ♂, 1 ♀ 1 imm. (D.M.2/785); Wiltons Bush, Wellington, September 8, 1946, G. Ramsay, 1 ♀ (D.M.2/787); King George V. Park, Wellington, May 21, 1950, R. R. Forster, 1 ♂, 2 ♀ (C.M.A. 729); Stokes Valley, Wellington, January 6, 1948, R. R. Forster, 1 ♀ (C.M.A. 738); same locality, January 10, 1947, R. K. Dell, 2 ♂, 1 ♀ (D.M.2/792); Kapiti Island, April, 1947, R. R. Forster, 1 ♀ (C.M.A. 737); Lyall Bay, Wellington, December 20, 1942, J. T. Salmon, 2 ♂



Figs. 496-500 *Algidia nigriflava* (Loman)

Fig. 496 Dorsal view body of male; Fig. 497 Lateral view eyemound of male; Fig. 498 Genital operculum; Fig. 499 Pro-lateral surface male pedipalp; Fig. 500 Pro-lateral surface female pedipalp.

(D.M.2/788); Wainui-o-mata, April 16, 1948, R. K. Dell, 1 ♂, 1 ♀ (D.M.2/789); Orongorongo, December 6, 1920, R. E. R. Grimmett, 7 ♂, 1 ♀ (D.M.2/791); Porirua, June 7, 1948, C. McCann, 1 ♂ (D.M.2/790); Turanganui, Wairarapa, July, 1948, A. C. O'Connor, 1 ♂ (C.M.A. 831).

Remarks. Separated from both *cuspidata* and *multispinosa* by possessing only five spines on the antero-median surface of the carapace. This species was originally placed in *Adaeum* because the type specimen showed a relatively broad sternum. I have been able to re-examine this specimen and have found that it had recently moulted before preservation and still retained the relatively broad sternum characteristic of the immature animals.

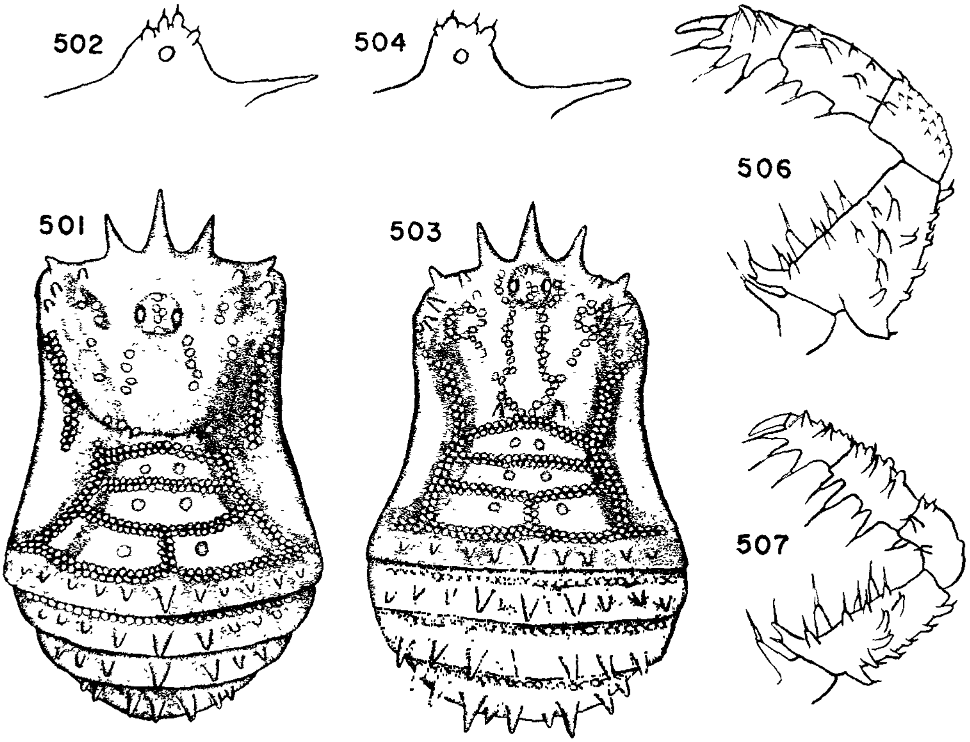
Algidia chiltoni Roewer, 1931

1920 *Algidia cuspidata* Hogg (Part), Proc.Zool.Soc.London, p.47
1931 *Algidia chiltoni* Roewer, Zeits. f. zool.138 (1), p.182
1943 *Adaeum hoggi* Forster, Trans.Roy.Soc.N.Z. 73 (1), p.70
Figs. 501-507

Male

Colour. General colour pale orange-brown with dark shading as shown in Fig. 501.

Body. The area immediately surrounding the eyemound is slightly raised. The



FIGS. 501-507 *Algidia chiltoni* Roewer

Fig. 501 Dorsal view body of male; Fig. 502 Lateral view of eyemound of male; Fig. 503 Dorsal view body of female; Fig. 504 Lateral view eyemound of female; Fig. 506 Pro-lateral surface male pedipalp; Fig. 507 Pro-lateral surface female pedipalp.

eyemound is rounded, armed with 4–5 low dorsal tubercles and separated from the anterior margin of the carapace by a distance equal to its width (Fig. 502). There are three strong spines on the median anterior surface of the carapace and a smaller tubercle on each anterior corner, behind which are three rounded tubercles. The dorsal pattern is as shown in Fig. 501. Few pustules present on the carapace, lateral rows separate, extending from a quarter of the length of the scute to immediately beyond the mid-point. A pair of small tubercles on the median anterior surface of Area 1 bridge the scutal groove; Areas 2–4 with a median pair of similar tubercles. Posterior margin of the scute with a transverse row of tubercles, median conical. Free tergites each with a transverse row of tubercles which are strong and conical apart from the more lateral tubercle on tergite 1 which is rounded (Fig. 501). The genital operculum is provided with from 9-10 elongate tubercles on the anterior margin.

Chelicerae. Normal.

Pedipalps. As shown in Fig. 506. The femur is stout, proximo-dorsal surface swollen, with a strong spinous tubercle, four similar tubercles extend across the pro-lateral surface.

Legs. Normal. Tarsal formula 3.7.4.4.

Measurements

		Scute	Length	2.64	Width	2.42		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.70	0.40	1.10	0.62	1.14	1.32	0.48	5.76
Leg 2 ..	1.23	0.44	1.80	0.70	1.85	2.46	1.28	9.76
Leg 3 ..	1.28	0.40	1.54	0.66	1.32	1.98	0.62	7.80
Leg 4 ..	1.58	0.44	2.20	0.70	1.58	2.90	0.35	9.75
Pedipalps ..		0.26	1.19	0.44	0.88		0.53	3.30
Chelicera ..	Basal	0.57	Second	0.88				1.45

Female. Eyemound as in Fig. 504. The dorsal pattern is more complete than in male as shown in Fig. 503. The tubercles on the posterior margin of the scute and the free tergites are stronger. The pedipalp is as shown in Fig. 507, the femur is slender, proximo-dorsal surface not swollen.

Measurements

		Scute	Length	2.64	Width	2.60		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.62	0.26	1.01	0.48	1.10	1.19	0.44	5.10
Leg 2 ..	1.14	0.40	1.76	0.66	1.89	2.42	1.10	9.37
Leg 3 ..	1.14	0.44	1.54	0.57	1.36	2.20	0.66	7.91
Leg 4 ..	1.50	0.44	2.33	0.66	1.67	3.26	0.66	10.52
Pedipalp ..		0.40	1.06	0.66	0.70		0.44	3.26
Chelicera ..	Basal	0.62	Second	0.79				1.41

Types. Mount Starve-all, Nelson, Canterbury, collected C. Chilton, in British Museum, Natural History (Not seen).

Records. Waitakere, Auckland, June 16, 1943, R. R. Forster, 1 ♂, 2 ♀ (D.M.2/823); Titirangi, Auckland, December 12, 1945, R. R. Forster, 1 ♂ (D.M.2/824); Auckland, September 21, 1950, T. E. Woodward, 1 ♂ (C.M.A. 830); Cuvier Island, Hauraki Gulf, July, 1943, R. R. Forster, 4 ♂, 3 ♀ (D.M.2/818); Vinegar Hill Reserve, near Taihape, December 12, 1948, R. R. Forster, 6 ♂, 7 ♀ (C.M.A. 740); Motutaika, April, 1951, A. C. O'Connor, 1 ♂ (C.M.A. 741); Pukemairu, April, 1951, A. C. O'Connor, 1 ♀ (C.M.A. 742); Taoroa River, February, 1950, A. C. O'Connor, 2 ♂, 5 ♀ (C.M.A. 739); near Turangi, Lake Taupo, April, 1951, A. C. O'Connor, 1 ♂ (C.M.A. 829); Raetihi, December 13, 1948, R. R. Forster, 1 ♂ (C.M.A. 752); Gentle Annie, Wanganui, August 27, 1949, J. M. Moreland, 2 ♀, 9 imm. (C.M.A. 748); Wanganui, January 28, 1943, R. R. Forster, 1 ♂, 2 ♀ (D.M.2/809); Totara Reserve, Manawatu, August 20, 1948, R. R. Forster, 6 ♂, 8 ♀ (C.M.A. 751); Mangahao, Manawatu, January 28, 1951, T. E. Woodward, 1 ♂ (C.M.A. 736); Feilding, December 26, 1948, R. R. Forster, 27 ♂, 5 ♀ (C.M.A. 730); same locality, 13 ♂, 21 ♀ (D.M.2/799); Mount Ngamoko, Waikaremoana, December 9, 1946, R. R. Forster, 6 ♂, 3 ♀ (D.M.2/820); Lake Waikare-iti, Waikaremoana, December 13, 1946, R. R. Forster, 1 ♀ (D.M.2/821); Waikaremoana, December 12, 1946, R. R. Forster, 2 ♀ (D.M.2/822); Kopuapounamu River, 1,400 feet, East Cape, October, 1948, J. M. Moreland, R. K. Dell, 3 ♂, 1 ♀ (D.M.2/825); Clifton, Hawkes Bay, December 27, 1947, R. R. Forster, 4 ♂, 5 ♀ (D.M.2/801); Te Mata Park, Havelock North, April 28, 1942, R. R. Forster, 2 ♂, 1 ♀ (D.M.2/802); Paiaka, July, 1949, A. C. O'Connor, 2 ♂, 1 ♀ (C.M.A. 732); Levin, June 6, 1948, R. R. Forster, 6 ♀ (D.M.2/816); Rimutuka District, February 10, 1942, R. R. Forster, 2 ♂, 4 ♀ (D.M.2/817); Pirinoa, Wairarapa, May, 1950, A. C. O'Connor, 1 ♂ (C.M.A. 750); Williamsons Creek, Pirinoa, October 1948, A. C. O'Connor, 3 ♂ (C.M.A. 749); Pangaroa, January 17, 1946, J. H. Sorensen, 1 ♂, 4 ♀ (D.M.2/802); Mangarei, Wairarapa, September 24, 1944, C. L. Wilton, 3 ♂, 1 ♀ (D.M.2/805); Turanganui River, Wairarapa, November 4, 1952, A. C. O'Connor, 5 ♂, 2 ♀ (C.M.A. 747); same locality, October 1948, A. C. O'Connor, 4 ♂, 7 ♀ (C.M.A. 731); Putangarua River, Wairarapa, October 6, 1947, R. K. Dell, 1 ♂ (D.M.2/810); Mount Ross, South Wairarapa, April 5, 1947, R. R. Forster, 1 ♂, 2 ♀ (D.M.2/804).

South Island. Stephen Island, May 19, 1950, R. R. Forster, 4 ♂, 7 ♀ (C.M.A. 767); same locality, September 13, 1948, J. T. Salmon, 1 ♂ (D.M.2/844); Kairuru, Nelson, December, 1951, A. C. O'Connor, 3 ♀ (C.M.A. 802); same locality, 1,500 feet, December, 1948, A. C. O'Connor, 5 ♂, 3 ♀ (C.M.A. 805); Canaan, Nelson, November, 1948, A. C. O'Connor, 20 ♂, 15 ♀ (C.M.A. 811); Bainham, Nelson, February, 1949, A. C. O'Connor, 2 ♂ (C.M.A. 813); Riwaka Valley, Nelson, January, 1949, A. u. O'Connor, 11 ♂ (C.M.A. 821); Maitai Valley, Nelson, October, 1948, A. C. O'Connor, 2 ♂ (C.M.A. 812); Nelson, June 4, 1937, coll. ? , 5 ♂, 6 ♀ (C.M.A. 833); Flora Hut, Mount Arthur District, January 28, 1948, R. R. Forster, 6 ♂, 4 ♀ (D.M.2/836); Flora Track, April 5, 1948, R. R. Forster, 2 ♂, 4 ♀ (D.M.2/843 6 ♂, 4 ♀ (D.M.2/836); Flora Track, April 5, 1948, R. R. Forster, 2 ♂, 4 ♀ (D.M.2/843); Leslie Valley Track, Mount Arthur District, January 24, 1948, R. K. Dell, 1 ♂, 4 ♀ (D.M.2/837); Salisbury Clearing, Mount Arthur Tableland, April 6, 1948, R. R. Forster, 1 ♀ (D.M.2/839); Mount Balloon, 4,100 feet, Mount Arthur Tableland, January 26, 1948, R. R. Forster, 1 ♂, 4 ♀ (D.M.2/840).

Remarks. There is no doubt that the species described above is the *Algidia chiltoni* described by Roewer. However there is some doubt that the specimen chosen by Roewer as the type (Canterbury, coll. C. Chilton) is of this species. I have not seen any specimens which could be referred to this species from Canterbury although it is possible that *Algidia marplesi* n.sp. will be found eventually in South Canterbury.

The specimen figured by Roewer appears to be a female.

Algidia chiltoni longispinosa n.s.sp.

Figs. 508–511

Male

Colour. As in *chiltoni.*

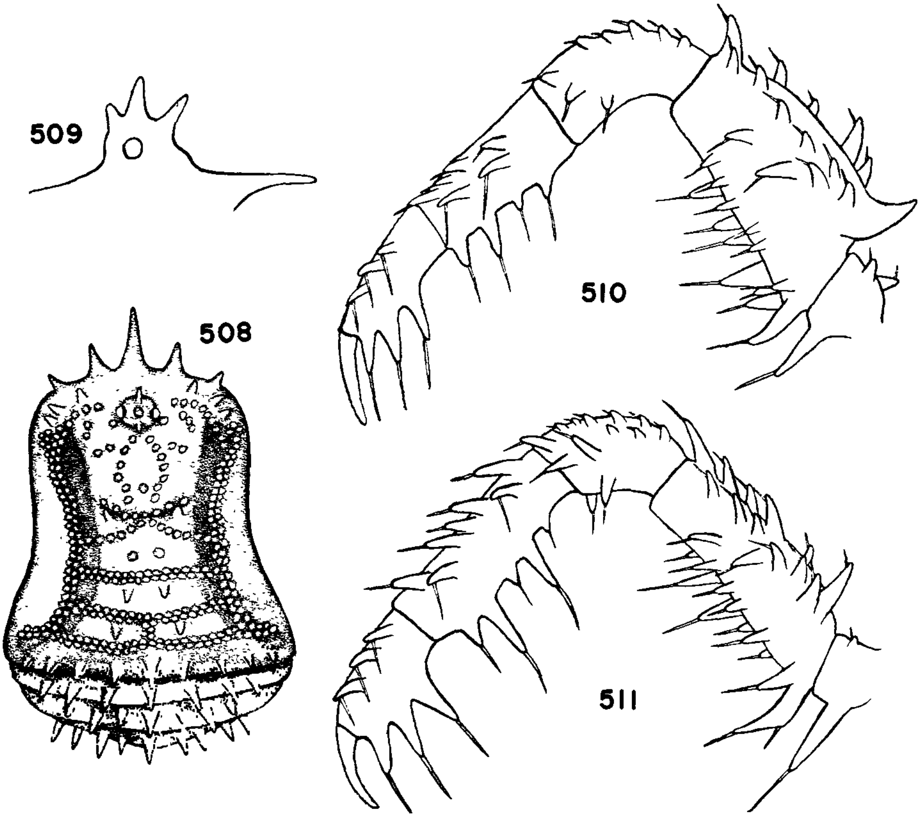
Body. The eyemound is provided with a row of three elongate tubercles along the dorsal surface as shown in Fig. 509. Dorsal pattern is as in Fig. 508, reduced on carapace, lateral rows extending almost the whole length of the scute. The posterior margin of the scute and the free tergites are provided with spinous tubercles, similar in form to *oconnori*, but fewer are present on the scute and tergites 1 and 2.

Pedipalps. As shown in Fig. 510. There are two tubercles present on the dorsal surface of the trochanter in addition to the elongate ventral tubercle. Femur with a swelling on the proximo-dorsal surface, merging into a strong spinous tubercle, somewhat similar to that found in *hoggi* but the disposition and relative size of the majority of the tubercles is similar to *oconnori.*

Legs. As in *hoggi.* Tarsal formula 3.7.4.4.

Measurements Scute Length 2.42 Width 2.24

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.66	0.40	1.23	0.57	1.23	1.28	0.44	5.81
Leg 2 ..	1.23	0.44	2.46	0.66	2.33	2.99	1.37	11.48
Leg 3 ..	1.06	0.44	1.98	0.57	1.54	2.38	0.70	8.67
Leg 4 ..	1.32	1.44	2.64	1.70	1.98	3.56	0.88	13.52
Pedipalp ..		0.31	0.97	0.53	0.79		0.48	3.08
Chelicerae	Basal	0.59	Second	0.86				1.45



FIGS. 508-511 *Algidia chiltoni longispinosa* n.s.sp.

Fig. 508 Dorsal view body of male; Fig. 509 Lateral view eyemound of male; Fig. 510 Pro-lateral surface male pedipalp; Fig. 511 Pro-lateral surface female pedipalp.

Female. Similar in structure to male. The pedipalp is more slender and appears in pro-lateral view as shown in Fig. 511.

Measurements

		Scute	Length	2.64	Width	2.46		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.66	0.26	1.41	0.48	1.58	1.32	0.57	6.28
Leg 2 ..	1.23	0.35	2.11	0.66	2.20	2.86	1.36	10.77
Leg 3 ..	1.10	0.44	2.02	0.57	1.58	2.38	0.57	8.66
Leg 4 ..	1.45	0.44	2.64	0.70	1.98	3.56	0.88	11.65
Pedipalp ..		0.26	1.14	0.53	0.70		0.62	3.25
Chelicera ..	Basal	0.48	Second	0.79				1.27

Types. Holotype male, Levin, February 8, 1942, R. R. Forster (D.M.2/796); Allotype female, same data (D.M.2/797); Paratypes: same data, 1 ♂, 2 ♀ (D.M.2/744, 2/814).

Records. Putara, Wairarapa, January 28, 1937, C. L. Wilton, 1 ♂ (D.M.2/808); Akatarawa, January 2, 1943, R. R. Forster, 1 ♂ (D.M.2/811); Otaki Forks, Tararua Range, June 7, 1941, R. R. Forster, 1 ♂ (D.M.2/812).

Remarks. I have placed *longispinosa* as a sub-species of *chiltoni* although the distribution is sympatric, as there is evidence of inter-breeding between these two forms in the Levin district.

Algidia chiltoni oconnori n.s.sp.

Figs. 512–514

Male

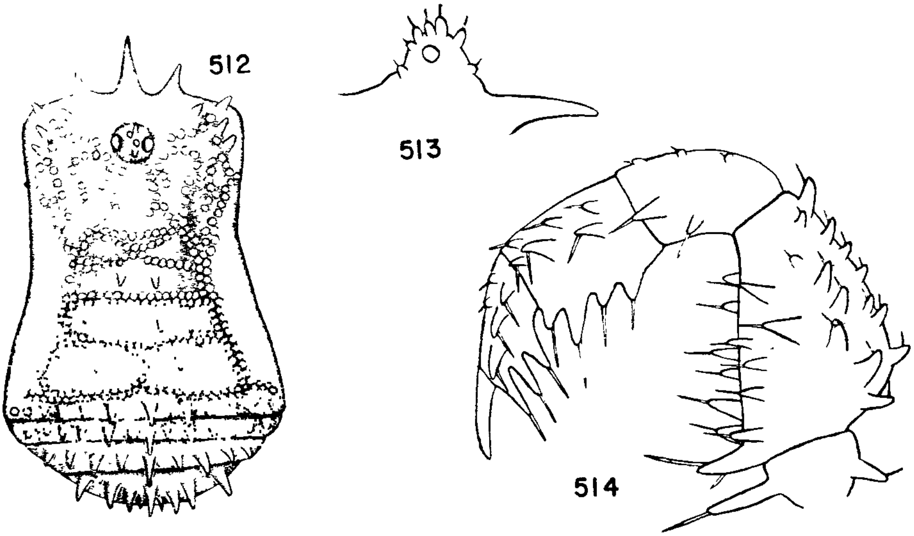
Colour. As described for *chiltoni.*

Body. The eyemound is provided with stronger tubercles than *chiltoni* (Fig. 513). The dorsal pattern is clearly defined and complete, as shown in Fig. 512, with the lateral rows extending almost the full length of the scute. The three spines on the median anterior surface of the carapace are more slender than in *chiltoni,* as are the tubercles on the posterior margin of the scute and the free tergites. Areas 2–4 with a pair of small conical tubercles on the median surface. Genital operculum with from 9–11 elongate pustules around the anterior margin.

Pedipalps. As shown in Fig. 514. The femur is stout but the proximo-dorsal surface of the femur is not swollen, differing mainly from *chiltoni* in possessing two further strong spinous tubercles on the mid-pro-lateral surface and a strong, apically rounded tubercle on the disto-dorsal surface. The tubercles on the retro-ventral margin of the tibia are stronger.

Legs. As in *chiltoni,* but tarsal formula 3.8.4.4.

Measurements		Scute	Length	2.64	Width	2.42		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.57	0.31	1.06	0.57	1.01	1.15	0.40	5.07
Leg 2 ..	1.23	0.35	2.42	0.66	2.11	2.86	1.36	10.99
Leg 3 ..	1.14	0.35	2.02	0.62	1.32	2.42	0.70	8.57
Leg 4 ..	1.76	0.48	2.42	0.76	1.76	3.30	0.79	11.27
Pedipalp ..		0.26	1.28	0.57	0.84		0.53	3.48
Chelicera ..	Basal	0.44	Second	0.79				1.23



FIGS. 512-514 *Algidia chiltoni oconnori* n.s.sp.

Fig. 512 Dorsal view body of male; Fig. 513 Lateral view eyemound of male; Fig. 514 Pro-lateral surface male pedipalp.

Types. Holotype male, Williamsons Creek, Pirinoa, Wairarapa, October 1948, A. C. O'Connor (D.M.2/793); Paratypes: same data, 1 ♂ (C.M.A. 743).

Records. Turanganui, Wairarapa, September 22, 1948, A. C. O'Connor, 1 ♂ (C.M.A. 746); Mangarei, Wairarapa, July 23, 1945, C. L. Wilton, 1 ♂ (D.M.2/806), same locality, July 3, 1945, C. L. Wilton, 2 ♂ (D.M.2/807); West side Rimutaka Range, June 13, 1948, R. K. Dell, 1 ♂ (D.M.2/813).

Remarks. I have named this form a sub-species of *chiltoni* although the distribution is sympatric. It is probable that further investigation will prove *oconnori* to be a dimorphic male form of *chiltoni*. To support this suggestion it may be pointed out that only males of this sub-species have been recorded.

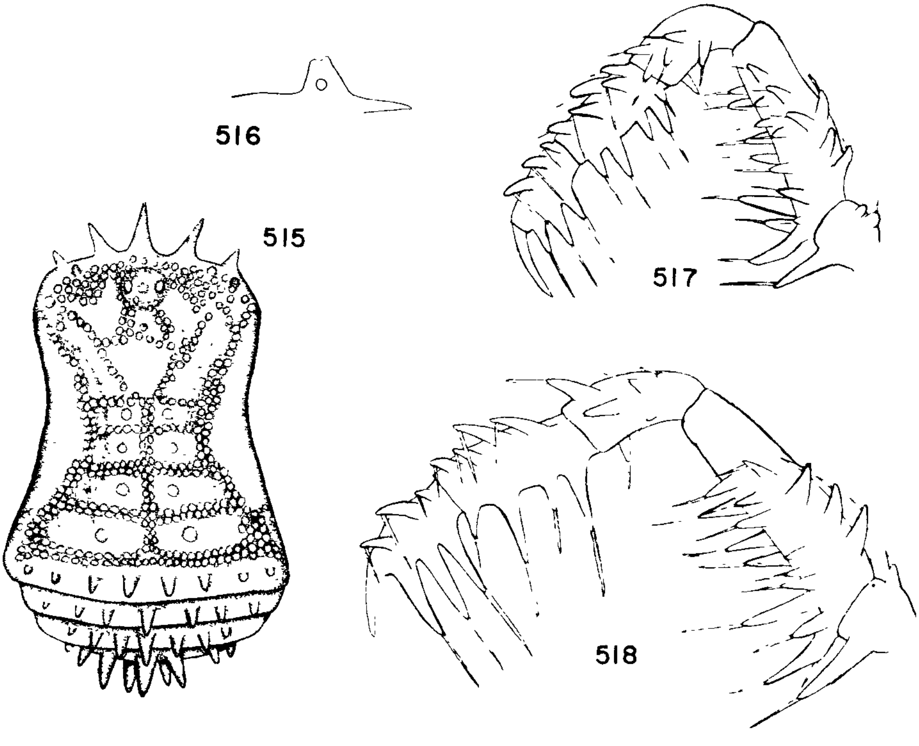
Algidia marplesi n.sp.

Figs. 515–518

Male

Colour. Ground colour dark orange-brown. There is a black band along the inner margins of the lateral rows of pustules and brown shading on the free tergites.

Body. The eyemound is sub-conical, with one or two small apical tubercles (Fig. 516). There are three strong spines on the antero-median surface of the carapace and a further smaller spine near each anterior corner. The dorsal pattern is strongly developed, as shown in Fig. 515, with numerous closely spaced pustules on the



FIGS. 515-518 *Algidia marplesi* n.sp.

Fig. 515 Dorsal view body of male; Fig. 516 Lateral view eyemound of male; Fig. 517 Pro-lateral surface of male pedipalp; Fig. 518 Pro-lateral surface of female pedipalp.

anterior surface of the carapace and a double row of pustules extending down the median surface of the tergal region. There is a median pair of low rounded tubercles on Areas 1–4. Posterior margin of the scute and free tergites with strong conical tubercles on the median surface and smaller tubercles laterally. The tubercles on tergite 3 are stronger than tubercles on tergites 1 and 2.

Chelicerae. Normal.

Pedipalps. Slender. Provided with numerous tubercles as shown in Fig. 517.

Legs. Typical. Tarsal formula 3.6.4.4.

Measurements

		Scute	Length	2.42	Width	2.42		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.48	0.26	1.10	0.48	0.97	1.10	0.48	4.87
Leg 2 ..	1.06	0.31	2.33	0.66	1.85	2.64	1.10	9.95
Leg 3 ..	1.01	0.31	1.80	0.48	1.32	2.24	0.70	7.86
Leg 4 ..	1.54	0.48	2.60	0.70	1.94	3.52	0.84	11.62
Pedipalp ..		0.26	1.10	0.66	0.57		0.40	2.99
Chelicera ..	Basal	0.40	Second	0.84				1.24

Female. Similar in structure to male. The dorsal pattern is similar to that of male but the area behind the eyemound is covered with closely spaced granules. The pedipalp is similar in appearance to male but longer and provided with much more strongly developed tubercles (Fig. 518).

Measurements

		Scute	Length	2.20	Width	1.85		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.44	0.22	1.14	0.48	1.45	1.01	0.53	5.27
Leg 2 ..	0.97	0.26	2.33	0.66	1.89	2.68	1.06	9.85
Leg 3 ..	0.88	0.31	1.76	0.44	1.32	2.29	0.66	7.66
Leg 4 ..	1.54	0.35	2.29	0.48	1.58	3.52	0.70	10.46
Pedipalp ..		0.22	0.92	0.62	0.48		0.44	2.68
Chelicera ..	Basal	0.26	Second	0.70				0.96

Types. Holotype male, St. Leonards, Dunedin, March, 1937, B. J. Marples (C.M.A. 764); Allotype female, same data (C.M.A. 765); Paratypes: Royal Terrace, Dunedin, June 18, 1937, B. J. Marples, 2 ♀ (C.M.A. 835); Taieri, Dunedin, January 26, 1951, R. R. Forster, 1 ♀ (C.M.A. 837).

Records. Duntroon, North Otago, May 18, 1948, B. J. Marples, 4 ♂, 5 ♀ (C.M.A. 838).

Remarks. This distinctive species is readily separated from all other species of the genus by the presence of rows of pustules down the median surface of the tergal region.

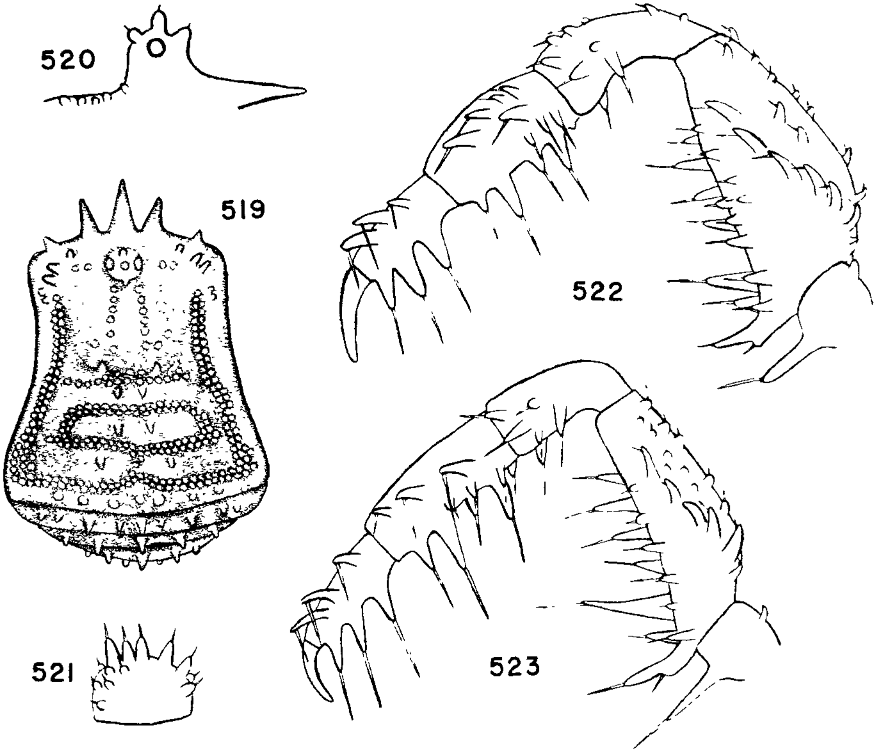
Algidia interrupta n.sp.

Figs. 519–523

Male

Colour. The ground colour is pale-yellow, median surface of the scute and free tergites heavily shaded with dark-brown.

Body. The eyemound is separated from the anterior margin of the carapace by a distance equal to its width and provided with a row of three rounded tubercles along the apical surface as shown in Fig. 520. The dorsal pattern is shown in Fig. 519,



FIGS. 519-523 *Algidia interrupta* n.sp.
Fig. 519 Dorsal view body of male; Fig. 520 Lateral view eyemound of male; Fig. 521 Genital operculum; Fig. 522 Pro-lateral surface male pedipalp; Fig. 523 Pro-lateral surface female pedipalp.

reduced on carapace, lateral rows extending back to the posterior transverse row, median tergal rows meeting laterally but not extending to the lateral rows. There is a pair of small tubercles on the antero-median surface of the tergal areas, directed forward over the scutal groove. Areas 2–4 with a median pair of small tubercles. Posterior margin of the scute with a transverse row of low rounded tubercles. Free tergites 1–3 each with a transverse row of small conical tubercles. Genital operculum with 5–6 elongate tubercles on anterior margin and a few smaller rounded tubercles on the sub-marginal surface (Fig. 521).

Chelicerae. Normal.

Pedipalps. Relatively slender and strongly tuberculate as shown in Fig. 522. The proximo-ventral surface of the femur is not swollen. There is a row of five strong spinous tubercles down the pro-lateral surface; proximo-ventral tubercle long, curved, with an apical and median seta. There are two smaller elongate tubercles near the base, followed by a prominent conical tubercle, stronger than the proximal.

Legs. Normal. Tarsal formula 3.6–7.4.4.

Measurements

		Scute	Length	2.38	Width	2.20		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.53	0.32	1.41	0.48	1.28	1.32	0.53	5.87
Leg 2 ..	1.10	0.35	2.68	0.66	2.42	3.30	1.14	11.65
Leg 3 ..	1.06	0.40	2.02	0.62	1.76	2.86	0.66	9 38
Leg 4 ..	1.54	0.48	2.86	0 66	2.16	3.95	0.79	12 44
Pedipalp ..		0.20	1 54	0.70	0 88		0 57	3.89
Chelicera ..	Basal	0.53	Second	0.79				1.32

Female. Similar in structure to male. The dorsal pattern is more complete. The femur of the pedipalp is more slender, but the number and disposition of the tubercles is similar, but tubercles relatively longer (Fig. 523).

Measurements

		Scute	Length	2.46	Width	2.82		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.66	0.31	1.32	0.53	1.19	1.32	0.44	5.77
Leg 2 ..	1.06	0.40	2.73	0.66	2.07	2.55	0.97	10.44
Leg 3 ..	0.88	0.40	1.85	0.66	1.76	2.86	0.70	9.11
Leg 4 ..	1.36	0.44	2.73	0.79	2.02	3.74	0.79	11.87
Pedipalp ..		0.18	1.28	0.57	0 75		0.53	3.31
Chelicera ..	Basal	0.44	Second	0.70				1.14

Types. Holotype male, Lake Manapouri, January 23, 1951, R. R. Forster (C.M.A. 769); Allotype female, same data (C.M.A. 770); Paratypes: same data, 1 ♂, 2 ♀ (C.M.A. 771, D.M.2 829).

Records. Kingston, Lake Wakatipu, January 23, 1951, R. R. Forster, 1 ♀ (C.M.A. 841); Homer, January, 1946, J. T. Salmon, 1 ♂ (D.M.2/845); Orepuki, Southland, September 1, 1948, J. H. Sorensen, 3 ♂ (C.M.A. 840); same locality, February 17, 1948, J. H. Sorensen, 1 ♀ (D.M.2/847); Bluff, May 18, 1949, J. H. Sorensen, 1 ♂, 1 ♀ (C.M.A. 839); same locality, January 27, 1946, R. R. Forster, 2 ♂, 4 ♀ (D.M.2/846).

Algidia interrupta solatia n.s.sp.

Figs. 524–527

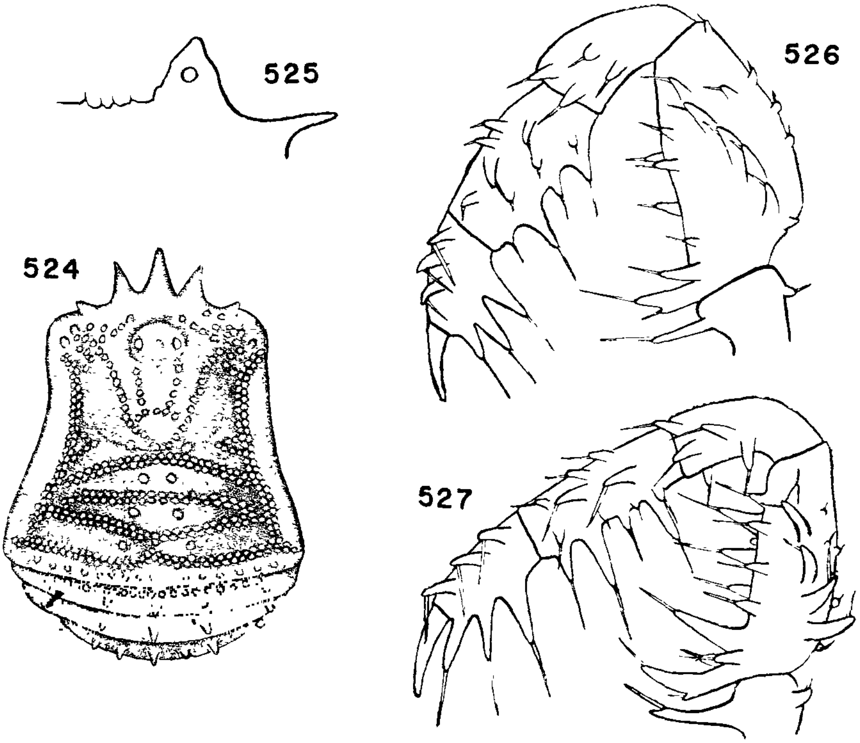
Male

Colour. Darker than *interrupta.*

Body. The eyemound is sub-conical in lateral view (Fig. 525) with a single small apical tubercle. The dorsal pattern is more complete than in *interrupta*, the transverse rows on the tergal region extend laterally to meet the lateral rows (Fig. 524). There is a pair of median tubercles on Areas 1–4, smaller and more rounded than in *interrupta.* The row of tubercles across the posterior margin of the scute are smaller and more numerous than in *interrupta.* The tubercles on the free tergites are similar to those of *interrupta* but there are fewer on tergite 1.

Pedipalp. Similar in structure to *interrupta* but with a row of only five spinous tubercles across the pro-lateral surface of the femur and without the strong spinous tubercle on the ventral surface in front of the proximo-ventral tubercle (Fig. 526).

Legs. As in *interrupta.* Tarsal formula 3.6.4.4.



FIGS. 524-527 *Algidia interrupta solatia* n.s.sp.
Fig. 524 Dorsal view body of male; Fig. 525 Lateral view eyemound of male; Fig. 526 Pro-lateral surface male pedipalp; Fig. 527 Pro-lateral surface female pedipalp.

Measurements Scute Length 2.29 Width 2.20

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.53	0.26	1.58	0.53	1.32	1.50	0.53	6.25
Leg 2 ..	1.14	0.35	3.52	0.66	2.90	3.74	1.28	13.59
Leg 3 ..	1.10	0.40	2.33	0.75	1.98	3.32	0.70	10.58
Leg 4 ..	1.32	0.44	3.30	0.75	2.42	4.79	0.70	13.72
Pedipalp ..		0.26	1.10	0.66	0.84		0.44	3.30
Chelicera ..	Basal	0.44	Second	0.84				1.28

Female. Similar in structure to male. The dorsal pattern is more strongly developed. Pedipalp more slender than male (Fig. 527). Femur with a strong spinous tubercle immediately beyond the proximo-ventral tubercle as in female of *interrupta*. The fifth tubercle on the pro-lateral surface is small.

Measurements Scute Length 2.16 Width 2.29

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.57	0.31	1.76	0.53	1.54	1.72	0.35	6.78
Leg 2 ..	1.10	0.40	2.43	0.66	2.86	4.11	1.14	13.70
Leg 3 ..	1.10	0.40	2.64	0.66	2.07	3.70	0.66	11.23
Leg 4 ..	1.45	0.44	3.70	0.70	2.60	4.79	0.61	14.29
Pedipalp ..		0.22	1.14	0.53	0.70		0.60	3.19
Chelicera ..	Basal	0.44	Second	0.70				1.14

Types. Holotype male, Okarito, Westland, December 7, 1949, R. R. Forster (C.M.A. 761); Allotype female, same data (C.M.A. 762); Paratype: same data, 1 ♀ (C.M.A. 763).

Records. Lake Paringa, October 23, 1950, L. P. Hughson, 1 ♀ ,2 imm. (C.M.A. 798); Lake Kanieri, January, 1950, J. H. Sorenson, 2 ♀ (C.M.A. 799); same locality, March 1949, A. C. O'Connor, 3 ♂, 1 ♀ (C.M.A. 816); Kumara, November, 1949, A. C. O'Connor, 1 ♀ (C.M.A. 820); Greymouth, January, 1949, A. C. O'Connor, 1 ♂ (C.M.A. 804); Taylorville Road, Greymouth, November 6, 1950, L. P. Hughson, 4 ♂, 3 ♀ (C.M.A. 807); Marsden Road, Greymouth, March 5, 1949, L. P. Hughson, 1 ♂, 1 ♀ (C.M.A. 803); Mount Davie, near Greymouth, January 24, 1950, R. R. Forster, 4 ♀ (C.M.A. 818); 12-mile, Greymouth, April 6, 1950, L. P. Hughson, 1 ♀ (C.M.A. 819); same locality, January 20, 1950, R. R. Forster, 2 ♂, 2 ♀ (C.M.A. 796); Arthur Pass, January 9, 1950, R. Jenkin, 1 ♀ (C.M.A. 827); Otira, March, 1951, J. S. Dugdale, 1 ♂, 1 ♀, 2 imm. (C.M.A. 828); Moana, March 10, 1950, R. R. Forster, 3 ♂, 5 ♀ (C.M.A. 797); Pororari, March, 1949, A. C. O'Connor, 2 ♂, 2 imm. (C.M.A. 815); Bullock Creek, Punakaiki, January 20, 1950, R. R. Forster, 1 ♀ (C.M.A. 800); Blackball, April 10, 1950, L. P. Hughson, 1 ♀ (C.M.A. 801); Woodpecker Bay, January 19, 1950, R. R. Forster, 2 ♂, 1 ♀, 2 imm. (C.M.A. 817); Kiwi Valley, Lewis Pass, November 14, 1949, R. R. Forster, 10 ♂, 8 ♀ (C.M.A. 825); Lake Taylor, April 14, 1952, R. R. Forster, 1 ♂, 4 ♀ (C.M.A. 827).

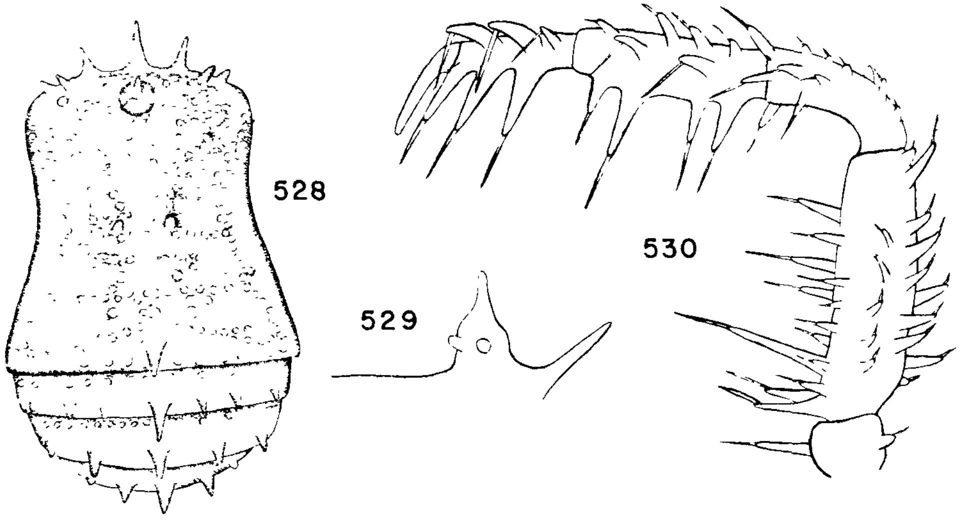
Remarks. This sub-species is most closely related to *interrupta* from which it is separated by the sub-conical eyemound and more complete dorsal pattern of the male.

Algidia homerica n.sp.

Figs. 528–530

Female

Colour. The general colour is pale-brown. The lateral rows of pustules are white. A black band extends down the mid-lateral surfaces of the scute.



FIGS. 528-530 *Algidia homerica* n.sp.

Fig. 528 Dorsal surface body of female; Fig. 529 Lateral view eyemound of male; Fig. 530 Pro-lateral surface female pedipalp.

Body. The eyemound is narrow but relatively high, with a strong apical spine, which is equal in height to the eyemound proper (Fig. 529) and a small rounded tubercle on the mid-posterior surface is separated from the anterior margin of the carapace by a distance which is less than the diameter of the eyemound. The dorsal pattern (Fig. 528) is formed by single rows of pustules which are not contiguous. There are three slender spines on the median anterior margin of the carapace and two smaller spines near each anterior corner. There is a row of small pustules across the posterior margin of the scute and a strong conical tubercle on the median surface. Free tergites with a transverse row of similar tubercles, of which the median is the stronger. Anal plate and sternites each with transverse row of low granules.

Pedipalps. Slender. Provided with numerous strong, slender tubercles as shown in Fig. 530.

Legs. There are four tubercles on the ventral surface of femur 1, of which the proximal pair are long and slender. Legs otherwise typical. Tarsal formula 3.6.4.4.

Measurements

		Scute	Length	2.42	Width	2.24		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	0.53	0.31	1.41	0.53	0.97	1.45	0.48	5.68
Leg 2	1.23	0.40	3.43	0.70	2.64	3.30	0.88	12.58
Leg 3	1.06	0.44	2.51	0.62	2.11	3.04	0.48	10.26
Leg 4	1.50	0.53	3.52	0.70	2.38	4.35	0.70	13.68
Pedipalp		0.26	1.28	0.84	0.75		0.62	3.75
Chelicera	Basal	0.48	Second	0.84				1.32

Types. Holotype female, Homer, January 21, 1946, R. R. Forster (D.M.2/827).

Algidia viridata n.sp.

Figs. 531–533

Male

Colour. The entire animal is a deep pastel-green, except tarsi which are pale-brown.

Body. The eyemound is rounded, with a row of three small tubercles on the dorsal surface, separated from the anterior margin of the carapace by a distance equal to its diameter. The anterior margin of the carapace is provided with 16–17 closely spaced, somewhat digitiform tubercles of which the median is longest with two further similar tubercles on the lateral surface (Fig. 531). Scute with numerous small pustules which are not arranged in pattern. There is a shallow depression on the mid-lateral region of the scute which merges with the shallow scutal groove and with the lateral grooves. The tergal areas are not separated. There is a pair of strong tubercles on the antero-median surface of the tergal area which are directed across the scutal groove. A pair of strong, spinous tubercles are present on the median surface of the tergal region behind which is a pair of small tubercles. The posterior margin of the scute and the three free tergites each with a transverse row of strong, spinous tubercles.

Chelicerae. There are pustules present on the disto-dorsal surface of the basal segment and on the dorsal surface of the second segment.

Pedipalps. As shown in Figs. 532, 533. Slender and armed with strong elongate setose tubercles. There is a pair of prominent tubercles on the disto-dorsal surface of the femur.

Legs. There is a strong, somewhat curved spinous tubercle on the distal retro-lateral surfaces of coxa 4 and trochanter 2, and the distal pro-lateral surface of coxa 4.

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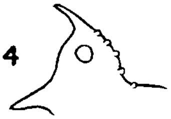

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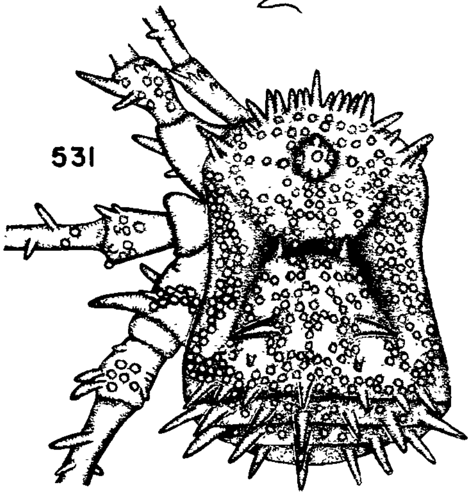

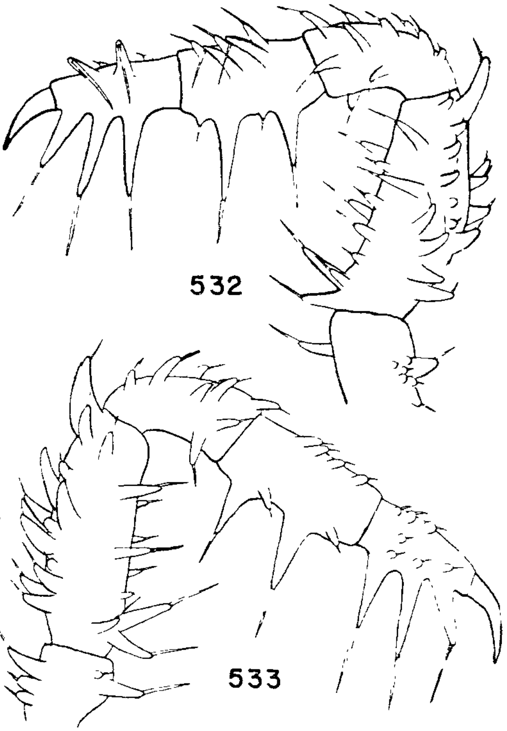

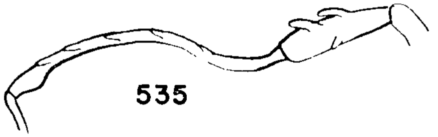

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FIGS. 531-533 *Algidia viridata* n.sp.

Fig 531 Dorsal view body and proximal segments of legs of male. Fig. 532 Pro-lateral surface male pedipalp; Fig. 533 Retro-lateral surface male pedipalp;

Figs. 534-535 *Algidia viridata bicolor* n.s.sp.

Fig. 534 Lateral view eyemound of male; Fig. 535 Patella and tibia Leg 4 of male

The legs are armed with prominent digitiform tubercles. Tibia of 2, 3 and 4 sinuous. Tarsal formula 3.6.4.4.

Measurements

		Scute	Length	2.20	Width	2.16		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.62	0.44	1.28	0.48	0.92	1.58	0.53	5.85
Leg 2 ..	1.10	0.48	4.43	0.88	3.34	4.79	0.97	15.99
Leg 3 ..	1.23	0.53	3.52	0.88	2.73	4.26	0.66	13.81
Leg 4 ..	1.58	0.66	4.79	0.92	3.30	5 89	0.70	17.84
Pedipalp ..		0.31	1.10	0.53	0.66		0.44	3.04
Chelicera ..	Basal	0.49	Second	0.84				1.33

Types. Holotype male, South Terrace, Karamea, January 27, 1951, L. P. Hughson (C.M.A. 928).

Algidia viridata bicolor n.s.sp.

Figs. 534–535

Male

Colour. Carapace and median portion of the tergal region bright green. Lateral and posterior margins of the tergal region, free tergites 1 and 2 and apical portion of eyemound, orange-brown. Ventral surface of body pale brown. Pedipalps pale chocolate-brown, but tibiae dark reddish-brown.

Body. General appearance as in *viridata.* Eyemound sub-conical, with a strong apical spine which curves forward (Fig. 534). Posterior margin of the scute with a single median spinous tubercle. Free tergites 1–3 with 5,3, and 3 tubercles respectively.

Chelicerae and *pedipalps* as in *viridata.*

Legs. As in *viridata*, but tibiae more strongly sinuous (Fig. 535) and tarsal formula 3.9–12.4.4.

Measurements

Scute Length 2.42 Width 2.20

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.66	0.40	1.72	0.84	1.58	1.76	0.53	7.49
Leg 2 ..	1.14	0.62	5.02	0.97	4.06	4.79	1.32	17.92
Leg 3 ..	1.32	0.53	4.13	0.92	2.77	5.00	0.97	15.64
Leg 4 ..	1.54	0.57	5.89	0.97	3.52	6.55	1.14	20.18
Pedipalp ..		0.35	1.23	0.71	0.75		0.57	3.61
Chelicera ..	Basal	0.53	Second	0.92				1.45

Female. Similar in structure to male.

Measurements

Scute Length 2.07 Width 2.11

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.66	0.44	1.89	0.70	1.50	1.58	0.66	7.43
Leg 2 ..	1.10	0.45	4.79	0.71	3.70	4.45	1.32	16.52
Leg 3 ..	1.06	0.53	4.26	0.88	2.68	4.12	0.93	14.46
Leg 4 ..	1.32	0.57	5.58	0.92	3.30	6.12	1.06	18.87
Pedipalp ..		0.31	1.10	0.70	0.72		0.57	3.40
Chelicera ..	Basal	0.40	Second	0.81				1.21

Types. Holotype male, Strongman Mine Road, 9 miles north of Greymouth, March 1, 1953, L. P. Hughson (C.M.A. 945); Allotype female, same data (C.M.A. 946); Paratypes, same data, 3 ♂, 3 ♀ (C.M.A. 947).

Remarks. The presence of a spine on the eyemound and the more numerous segments to tarsus 2 clearly separate this sub-species from *viridata.*

Genus *TRIREGIA* Forster, 1948

1943 *Adaeum* (Part), Forster, Trans. Roy. Soc. N.Z. 73 (1), p.70
1948 *Triregia* Forster, Rec. Auck. Inst. Mus. 3 (4–5), p.316

Eyemound armed with two or three strong elongate tubercles, spaced from the anterior margin of the carapace by a distance about equal to its own diameter. Anterior margin of the carapace armed with strong spinous processes. Scute with pustules, arranged in an incomplete pattern. Posterior margin of the scute and free tergites each with a transverse row of spinous tubercles. Legs strongly tuberculate. Calcaneus much shorter than astragalus. Tarsal formula 3.5–8.4.4.

Side branches of claws much smaller and weaker than median prong. Sexual dimorphism slight, usually evident in pedipalps. Male dimorphism not recorded.

Genotype (o.d.) *Triregia monstrosa* Forster, 1948

This genus shows some affinities with *Algidia* and *Cenefia* but appears, from the figures and descriptions of Roewer (1923), to be very closely related to *Triconobunus* Roewer 1914 and *Diaenobunus* Roewer 1914, two genera established by Roewer (1923) for New Caledonian species.

Key to the species and sub-species of Triregia

1. Eyemound with two apical tubercles 2
   Eyemound with three apical tubercles 3
2. Tergal Area 4 and posterior margin of scute, each with a pair of small spinous tubercles .... *bilineata* (Forster)
   Tergal Area 4 and posterior margin of scute without spinous tubercles......... .... *monstrosa* Forster
3. Antero-median surface of carapace with five spines. Areas 1–4 with a single median pair of tubercles .... *fairburni* (Forster)
   Antero-median surface of carapace with seven spines. Areas 1–4 each with four spinous tubercles .... *fairburni grata* n.s.sp

Triregia monstrosa Forster, 1948

1948 *Triregia monstrosa* Forster, Rec. Auck. Inst. Mus. 3 (4–5), p.317

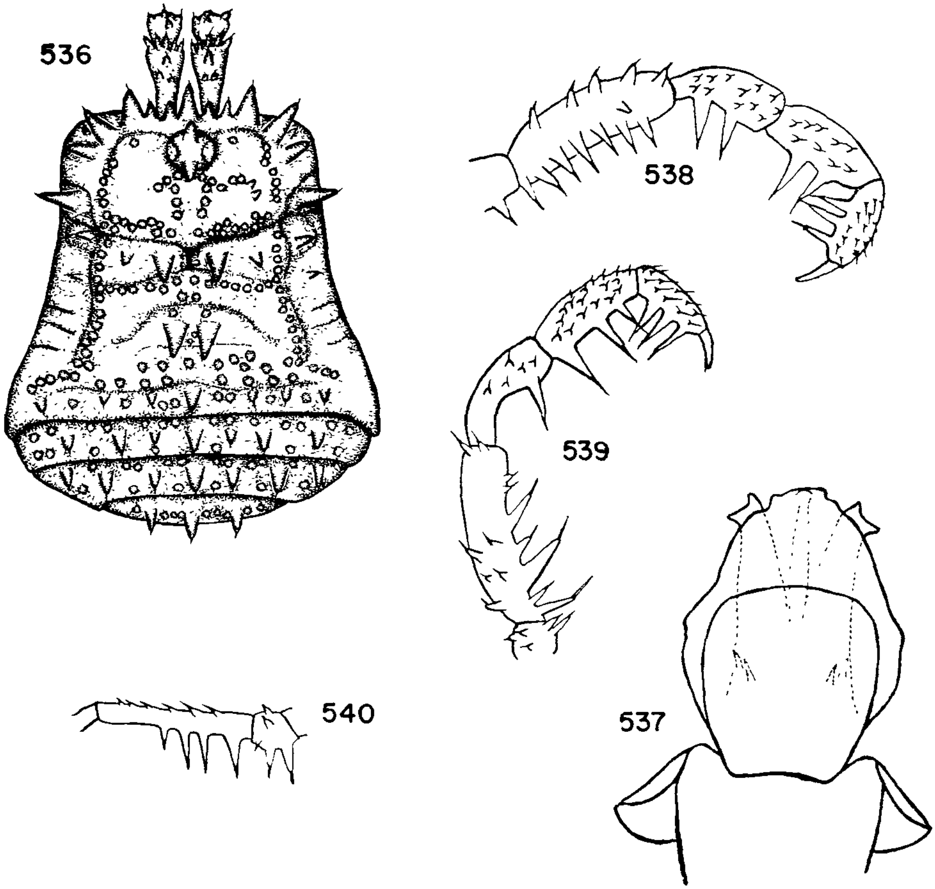
Figs. 536–540

Male

Colour. Uniform black, tubercles on scute and free tergites pale-brown.

Body. The dorsal pattern is poorly developed as shown in Fig. 536. The eyemound is bluntly conical, separated from the anterior margin of the carapace by a distance equal to its diameter, with two strong, erect spines on the dorsal surface, one anterior to, the other posterior to the eyes. The scutal groove is well defined. There is a groove extending across the carapace behind the anterior margin and down the sub-lateral surface of the tergal region. The anterior margin of the carapace is armed with seven spines, the median and outer spines are strong. There are two further spines behind each anterior corner of the carapace and a single spine on the postero-lateral surface. Areas 1 and 3 are provided with a pair of strong, conical tubercles on the median surface. The posterior margin of the scute and the free tergites with a transverse row of conical tubercles as shown in Fig. 536. Sternites smooth. Genital operculum with small pustules.

Genitalia. As shown in Fig. 537. The aedeagus is slender, distal portion slightly distended.



FIGS. 536-540 *Triregia monstrosa* Forster

Fig. 536 Dorsal view body of male; Fig. 537 Male genitalia; Fig. 538 Pro-lateral surface of male pedipalp; Fig. 539 Retro-lateral surface of male pedipalp; Fig. 540 Trochanter and femur of first leg of male.

Chelicerae. Basal segment with a single mid-dorsal and five disto-dorsal tubercles. Second segment uniformly covered with small tubercles.

Pedipalps. Slender, provided with numerous tubercles as shown in Figs. 538–9.

Legs. Mainly smooth. Trochanter 1 with two and femur 1 with four spinous tubercles on the ventral surface (Fig. 539). Tarsal formula 3.7–8.4.4.

Measurements		Scute	Length	5.67	Width	5.69		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.67	0.79	2.64	1.10	1.98	3.12	0.97	12.27
Leg 2 ..	2.64	0.88	5.58	1.32	5.32	9.15	1.98	26.87
Leg 3 ..	2.64	1.01	4.57	1.45	3.52	5.23	1.32	19.74
Leg 4 ..	4.35	1.01	6.12	1.89	5.27	8.71	1.54	28.89
Pedipalp ..		0.57	1.98	1.01	1.41		1.19	6.16
Chelicera ..	Basal	1.01	Second	1.50				2.51

Types. Holotype male, Great Island, Three Kings, G. Turbott (Auckland Museum); Paratype male, same data (D.M.2/61).

Triregia bilineata (Forster, 1943)

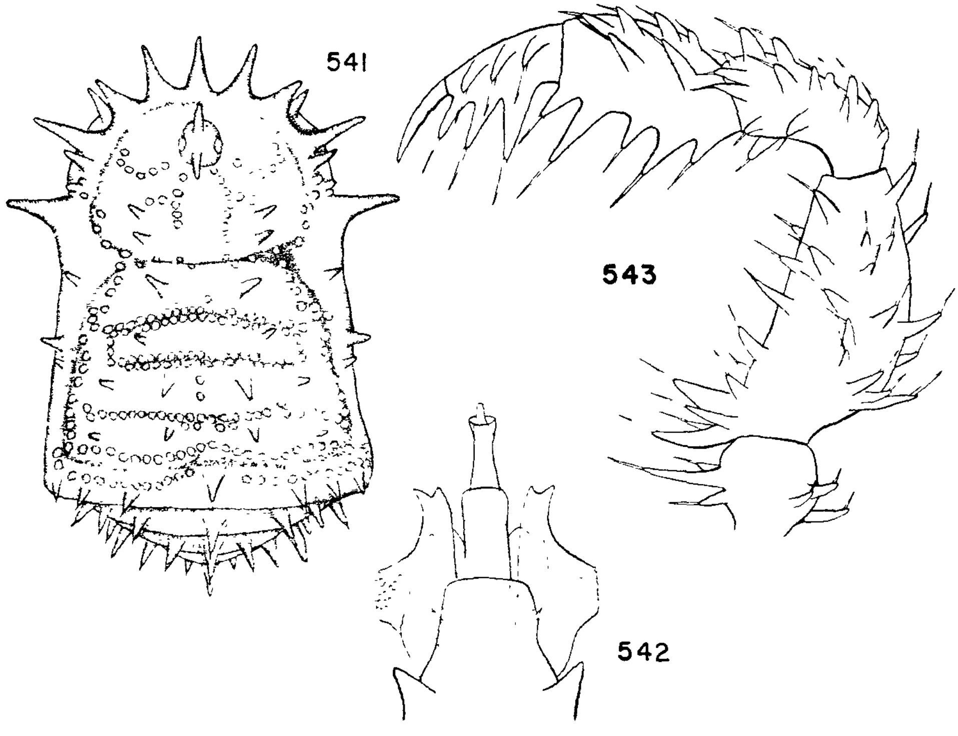
1943 *Adaeum bilineatum* Forster, Trans.Roy.Soc.N.Z., 73 (1), p.70
1948 *Triregia bilineata* (Forster), Rec.Auck.Inst.Mus. 3 (4–5), p.318
Figs. 541–543

Male

Colour. Uniform dark brown.

Body. The eyemound is relatively high, with two strong apical spines, which are equal in height to the eyemound. The dorsal pattern is shown in Fig. 541, strongly developed on tergal region. The scutal groove is distinct and merges laterally with grooves which extend along the sub-lateral margins of both carapace and tergal region. There are nine strong spines along the anterior border of the carapace and a further stronger spine on the lateral surfaces at about half-way. There are two smal conical tubercles on the mid-lateral surface near the posterior margin of the carapace. Areas 1–4 are provided with a median pair of conical tubercles, which are small on 2 and 4. Three similar tubercles are present on the lateral margins, one anterior, two median. Posterior margin with a strong median conical tubercle and three smaller lateral tubercles. Free tergites with strong conical tubercles as shown in Fig. 541. The genital operculum is covered with small setose pustules, from 12–15 in number.

Genitalia. As shown in Fig. 542. There are four setae on the ventral plate, one superior, 3 inferior, sub-equal in length. The aedeagus is slender, with a small distal cup.



FIGS. 541-543 *Triregia bilineata* (Forster)
Fig. 541 Dorsal surface body of male; Fig. 542 Ventral view male genitalia; Fig. 543 Pro-lateral surface male pedipalp.

Chelicerae. With small tubercles on the disto-dorsal surface of the basal segment and entire dorsal surface of the second segment.

Pedipalps. As shown in Fig. 543. Trochanter with three tubercles on both dorsal and ventral surface, median ventral elongate. There is a group of four tubercles on the proximo-ventral surface of the femur, two strong median, two small lateral, and a further six tubercles along the ventral surface. Five tubercles extend obliquely down the distal half of the pro-lateral surface. Dorsal surface with somewhat elongate tubercles. Patella with numerous strong tubercles. Tibia with two pro-ventral and five retro-ventral tubercles. Tarsus with three tubercles on both ventral surfaces.

Legs. Ventral surface of trochanter 1 with two, proximal half of ventral surface of femur 1 with five strong spinous tubercles. Legs otherwise sparsely covered with small thorn-like tubercles. Tarsal formula 3.8.4.4.

Measurements

		Body	Length	4.12	Width	3.17		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	0.97	0.66	2.51	1.01	1.63	2.77	0.66	10.21
Leg 2	1.85	0.69	5.75	1.32	4.35	6.11	1.67	21.74
Leg 3	1.89	0.66	4.13	1.32	3.08	5.01	1.01	17.10
Leg 4	3.08	0.75	5.75	1.32	3.74	7.80	1.10	23.54
Pedipalp		0.53	1.85	0.92	1.23		0.70	5.23
Chelicera	Basal	0.92	Second	1.23				2.15

Female. Similar in structure to male.

Measurements

		Scute	Length	3.08	Width	3.56		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	1.10	0.48	2.64	0.88	1.80	2.02	0.66	9.58
Leg 2	1.80	0.48	5.67	1.10	4.57	6.15	1.72	21.49
Leg 3	1.72	0.57	4.13	0.88	2.86	4.79	1.10	16.05
Leg 4	2.55	0.79	6.45	1.14	3.92	7.29	1.10	23.24
Pedipalp		0.44	1.76	0.79	1.06		0.48	4.53
Chelicera	Basal	0.84	Second	1.01				1.85

Types. Holotype male, Mair Park, Whangarei, January 15, 1929, E. Fairburn (D.M.2/3); Paratypes: same data, 3 ♂, 5 ♀ (D.M.2/203); same locality, October 29, 1929, E. Fairburn, 2 ♂, 3 ♀ (D.M.2/274); Mataraua, Kaikohe, March 14, 1929, E. Fairburn, 3 ♂, 3 ♀ (D.M.2/272, 2/275).

Remarks. This species is related to *monstrosa* but clearly separated from it by differences in the size and grouping of the spinous tubercles of the scute.

Triregia fairburni (Forster, 1948)

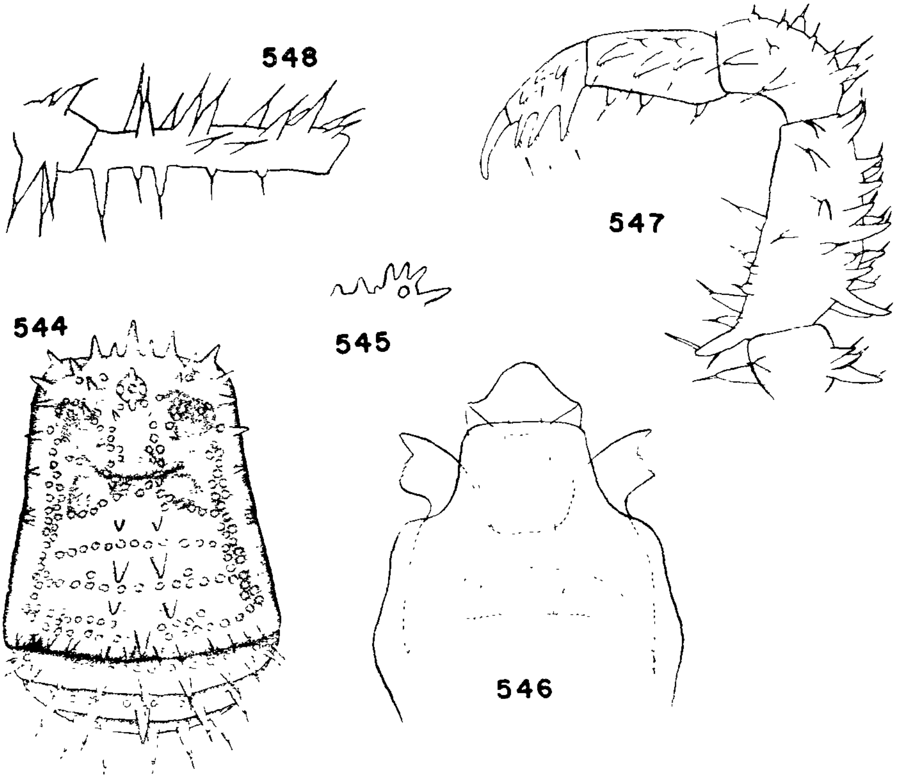
1948 *Adaeum fairburni* Forster, Trans.Roy.Soc.N.Z., 73 (1), p.71

Figs. 544–547

Male

Colour. General colour orange-brown, but with a blackish area about the scutal groove and extending to the carapace and tergal region as shown in Fig. 544. Second segment of chelicera with pale-brown reticulate markings.

Body. Eyemound sub-spherical, set from the anterior margin of the carapace by a distance equal to two-thirds of its width and armed with a median row of three elongate tubercles (Fig. 545). The dorsal pattern is shown in Fig. 544, the lateral



Figs. 544-548 *Triregia fairburni* (Forster)

Fig. 544 Dorsal surface body of male; Fig. 545 Lateral view eyemound of male. Fig 546 Male genitalia. Fig. 547 Prolateral surface male pedipalp; Fig. 548 Trochanter and femur leg 1.

tergal rows are single. The scutal groove is limited to the median surface. There are five spines on the anterior median surface of the carapace; two spines flanking the median spine are small. There is a further strong spine present on each anterior corner. Ten small conical tubercles are distributed on the carapace as shown in Fig. 544, and seven further, somewhat similar tubercles are present on each lateral margin of the scute. Tergal areas 1–4 each with a pair of median tubercles. The tubercles on Area 3 are stronger. The posterior margin of the scute and the free tergites armed with a transverse row of conical tubercles, more elongate on the free tergites. Sternites smooth apart from a few pustules. Genital operculum with a group of small tubercles near the anterior margin.

Genitalia. As shown in Fig. 546, the aedeagus is relatively slender but enclosed by broad sheath. The ventral plate is entire and large, with three sub-equal setae.

Chelicera. There are a few small tubercles on the dorsal surfaces of both segments.

Pedipalps. With strong spinous tubercles as shown in Fig. 547. There are three strong conical tubercles on the proximo-ventral surface of the femur. The proximo-median tubercle is directed back.

Legs. The trochantera and tibiae of all legs are provided with slender spinous tubercles, grouped mainly on the dorsal and ventral surfaces (Fig. 548). Femur 4 is stout, much stouter than femora 1–3. Tarsal formula 3.6–7.4.4.

Measurements

Scute Length 2.77 Width 2.33

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.79	0.44	1.23	0.57	0.92	1.54	0.66	6.15
Leg 2 ..	1.23	0.53	3.17	0.75	2.73	2.73	1.19	12.33
Leg 3 ..	1.50	0.66	2.51	0.73	1.94	2.82	0.66	10.82
Leg 4 ..	2.29	0.75	3.30	0.84	2.64	4.10	0.70	14.62
Pedipalp ..		0.44	1.14	0.57	0.70		0.53	3.38
Chelicera ..	Basal	0.79	Second	1.14				1.93

Female. Similar in structure to male but the tubercles are somewhat more slender. Femora 4 is not swollen, similar in appearance to femora 1–3.

Measurements

Scute Length 2.46 Width 2.55

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.70	0.35	1.19	0.53	0.79	1.32	0.44	5.32
Leg 2 ..	1.14	0.53	2.86	0.66	2.16	3.12	1.10	11.57
Leg 3 ..	1.23	0.52	2.20	0.62	1.54	2.20	0.62	8.93
Leg 4 ..	1.80	0.66	2.86	0.70	2.12	3.52	0.66	12.32
Pedipalp ..		0.40	1.01	0.48	0.53		0.44	2.86
Chelicera ..	Basal	0.57	Second	0.79				1.36

Types. Holotype female, Karo Forest, Whangarei, June 8, 1929, E. Fairburn (D.M.2/5); Allotype male, Hikurangi Swamp, March 24, 1929, E. Fairburn (D.M.2/273).

Records. Taipa, January 24, 1950, A. C. O'Connor, 3 ♂ (C.M.A. 201); Kohuronaki, January 21, 1950, A. C. O'Connor, 2 ♂, 1 ♀ (D.M.2/202); Church Road, near Pekerau, January 24, 1950, A. C. O'Connor, 1 ♂ (D.M.2/206); Titirangi, December 12, 1945, R. R. Forster, 1 ♂, 1 ♀ (D.M.2/766); Waitakere Hills, February 8, 1949, R. R. Forster, 1 ♂ (C.M.A. 199); same locality, May 31, 1942, M. W. Carter, 1 ♀ (C.M.A. 200).

Remarks. A large proportion of the specimens examined were heavily infested with mites.

Triregia fairburni grata n.sp.

Figs. 549–552

Male.

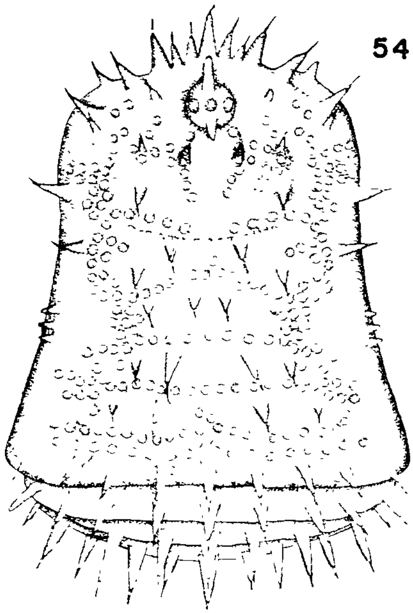
Colour. The general colour of the scute is dark reddish-brown, with a dark patch on the mid-lateral surface of the carapace immediately in front of the scutal groove.

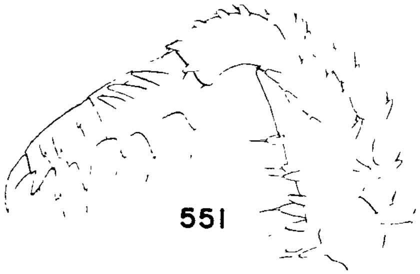
Body. Larger than *fairburni*. The eyemound is as described for *fairburni*. The dorsal pattern is shown in Fig. 549, the lateral longitudinal rows are irregular. There are seven spines on the median anterior surface of the carapace, as compared with five in *fairburni*. The disposition of the remaining tubercles on the scute is as in *fairburni* but there is a group of three small tubercles on the mid-lateral surface and a second pair of small tubercles on Areas 1–4. The spinous tubercles on the posterior surface of the scute and the three free tergites are relatively longer than in *fairburni*.

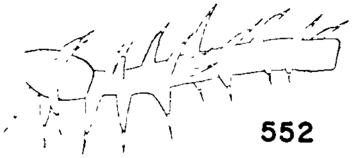
Genitalia. As shown in Fig. 550.

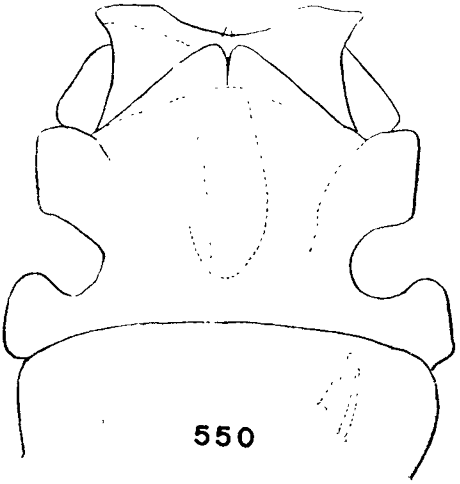
Chelicerae. As in *fairburni*.

Pedipalps. As shown in Fig. 551, similar to *fairburni* but differing in minor characters in regard to the size and distribution of tubercles.









FIGS. 549-552 *Triregia fairburni grata* n.s.sp.

Fig. 549 Dorsal surface body of male; Fig. 550 Male genitalia; Fig. 551 Pro-lateral surface male pedipalp; Fig. 552 Trochanter and femur of leg 1.

Legs. The legs are covered with spinous tubercles as in *fairburni* but the tubercles are relatively smaller (Fig. 552). Tarsal formula 3.8-11.4.4.

Measurements

Scute Length 3.39 Width 3.17

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	1.06	0.53	1.98	0.79	1.54	2.38	0.79	9.07
Leg 2	1.58	0.53	4.26	0.88	3.92	5.67	1.67	18.51
Leg 3	1.54	0.62	3.56	1.01	2.60	4.35	0.97	14.65
Leg 4	1.58	0.75	4.57	1.10	3.52	6.46	1.10	19.08
Pedipalp		0.40	1.36	0.75	1.01		0.66	4.18
Chelicera	Basal	0.88	Second	1.23				2.11

Female. Similar to male but larger.

Measurements

Scute Length 3.52 Width 3.92

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.10	0.53	2.33	0.92	1.76	2.99	0.88	10.51
Leg 2 ..	1.76	0.57	4.57	1.10	4.35	6.33	1.98	20.66
Leg 3 ..	1.76	0.70	3.70	1.14	3.17	4.57	0.88	15.92
Leg 4 ..	2.46	0.88	5.27	1.10	3.95	6.55	1.10	21.31
Pedipalp ..		0.44	1.67	0.88	1.14		0.62	4.75
Chelicera ..	Basal	0.84	Second	1.14				1.98

Types. Holotype male. Waikare-iti Track, Waikaremoana, December 13, 1946, R. R. Forster (D.M.2/276); Allotype female, same data (D.M.2/277); Paratypes: same data, 1 ♂ (D.M.2/278); same locality, February 12, 1949, J. T. Salmon, 1 ♂ 1 ♀ (D.M.2/283); Aniwanawana, Waikaremoana, December 13, 1946, J. T. Salmon, 1 ♀ (D.M.2/279); Mount Ngamoko Track, Waikaremoana, December 9-14, 1946, R. R. Forster, 2 ♂, 2 ♀ (D.M.2/280-282); Waikaremoana, December 13, 1946, R. R. Forster, 2 ♂, 1 ♀ (C.M.A. 204).

Records. Waiau, Opotiki, date ?, coll. ? 1 ♂ (C.M.A. 205); Kopuapounamu River, Ruakumara Range, 1,400 feet, East Cape, December 1950, R. K. Dell, J. M. Moreland, 2 ♂, 5 ♀ (D.M.2/310).

Remarks. This form is restricted to the East Cape District, extending inland to Lake Waikaremoana. It is easily separated from *fairburni* by its larger size and the more numerous spines on the anterior margin of the carapace.

Tribe *TRIAENOBUNINI* (Pocock)

Key to the New Zealand Genera

1. Eyemound produced forward to form a prominent conical process..........2
   Eyemound small and rounded, tuberculate..........*Cenefia* Roewer, 1931
2. Tarsus 1 with two segments. Eyemound provided with strong lateral processes ....*Pristobunus* Roewer, 1931
   Tarsus 1 with three segments. Eyemound without strong lateral processes ....*Muscicola* n. gen.

Genus *CENEFIA* Roewer, 1931

1931 *Cenefia* Roewer, Zeits.f.zool., 138, (1), p.180

Eyemound rising from the anterior margin of the carapace, with an apical tubercle. Anterior margin of the carapace strongly tuberculate. Scute with rows of pustules arranged in a pattern. Areas 3 and 4 with a median pair of tubercles. Posterior margin of the scute and free tergites each with a transverse row of tubercles. Genital operculum smooth. Sternum deeply forked posteriorly. Leg 1 strongly tuberculate. Calcaneus small, barely discernible. Tarsal formula 2.4.3.3. Side branches of claws of legs 3 and 4 much smaller and weaker than median prong. Sexual dimorphism slight.

Genotype (monotypy) *Cenefia adaeiformis* Roewer, 1931

This genus shows some affinities with *Pristobunus*, (scutal pattern and genitalia) but is more closely related to a number of as yet undescribed species from Australia, which will probably be placed in *Triaenobunus* Soerensen.

Key to the species of Cenefia

1. Posterior margin of the scute with a strong median spinous tubercle, more lateral tubercles small and rounded..................................2

Posterior margin of the scute armed with more or less equal sized conical tubercles..*delli* n.sp.
2. Area 2 with a median pair of tubercles..................................3
Area 2 without tubercles..........................*westlandica* n.sp.
3. Eyemound rounded and armed with a strong apical tubercle..............
....*adaeiformis* Roewer
Eyemound flattened, without apical tubercle..................*sorenseni* n.sp.

Cenefia adaeiformis Roewer, 1931

1931 *Cenefia adaeiformis* Roewer, Zeits.f.zool.138, (1), p.180
Figs. 553–554

Male.

Colour. General colour rusty-brown. Scute shaded with dark-brown, tubercles and pustules pale-yellow. Chelicerae and pedipalps rusty-yellow, with black reticulate markings. Legs rusty-yellow, femora and tibiae blackish with a pale median band.

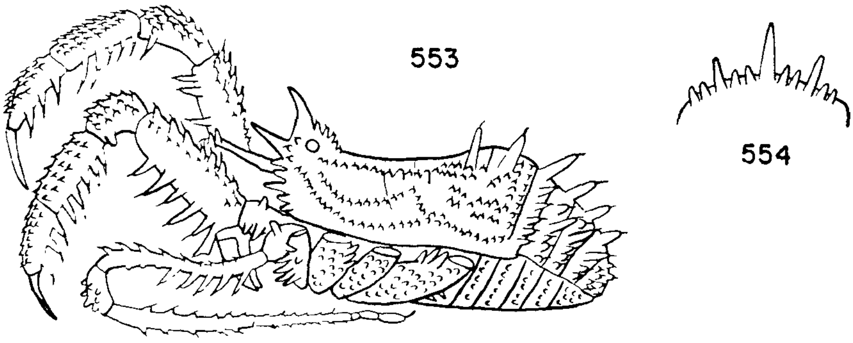
Body. Eyemound provided with a number of small pustules and a strong apical tubercle, directed slightly forward. Anterior margin of the carapace with eleven tubercles, median and mid-lateral strong. Scute with well defined pattern of small pustules. Areas 1 and 2 each with a pair of small median tubercles; Areas 3 and 4 each with an elongate pair of median tubercles. Posterior margin of scute with a strong median tubercle and smaller lateral tubercles. Free tergites 1–3 each with a transverse row of spinous tubercles, stronger on the median surface.

Chelicerae. Basal segment with a single tubercle on the disto-dorsal surface. Second segment with a few small dentiform tubercles on the dorsal surface.

Pedipalps. All segments other than trochanter with numerous small tubercles on the dorsal surface. Femur with row of six spinous tubercles on the retro-ventral surface, proximal clavate, and 3 or 4 pro-ventral. Tibia with 6 retro- and 5 pro-ventral tubercles. Tarsus with three tubercles on both ventral margins.

Legs. Femur of leg 1 with a row of five elongate tubercles on the ventral surface. Legs otherwise with small tubercles. Tarsal formula 2.4.3.3.

Measurements.
Length of body 3.5.
Leg 1, 4.5; Leg 2, 9.0; Leg 3, 6.5; Leg 4, 8.0.



FIGS. 553-554 *Cenefia adaeiformis* Roewer
Fig. 553 Lateral view; Fig. 554 Anterior margin of carapace (From Roewer).

Type. Holotype male, Akaroa, Roewer Collection N.1257/22, Bremen Museum.

Remarks. This species has not been rediscovered and it is doubtful whether the type locality is correct. Judging from the species recorded by Roewer from Akaroa, few of which undoubtedly were collected in this locality, it is possible that the species described above will be eventually found on Stewart Island.

Cenefia westlandica n.sp.

Figs. 555–560

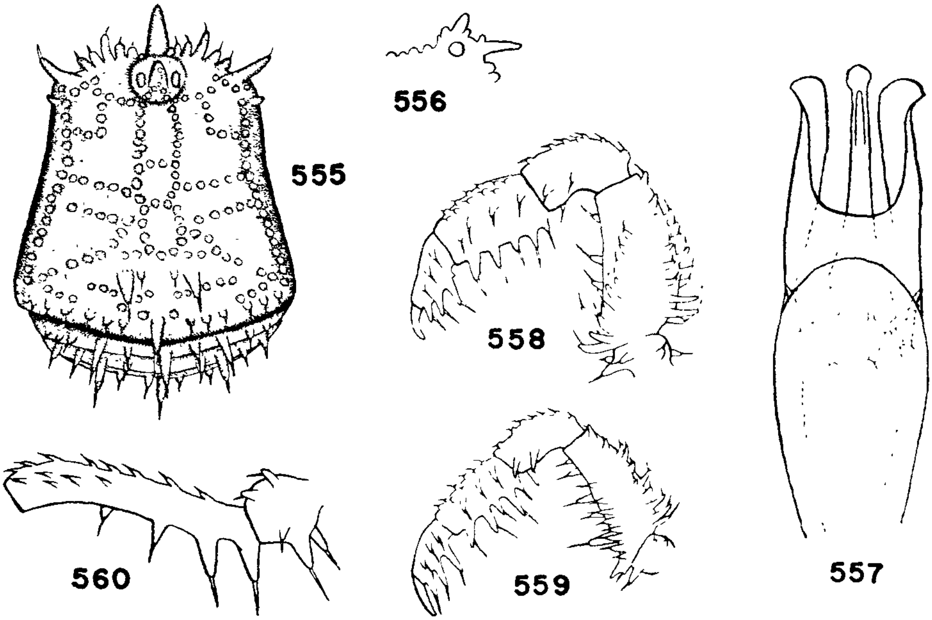
Male.

Colour. Orange-brown.

Body. The eyemound is low, slightly wider than it is high, with a stout apical tubercle which is directed obliquely forward (Fig. 556). There is a strong conical tubercle on the median and lateral surfaces of the anterior margin of the carapace, with from five to six smaller tubercles along each anterior margin (Fig. 555). The scutal groove is absent. The dorsal pattern is well developed as shown in Fig. 555. There is a pair of strong conical tubercles on the median surface of Area 3 and a similar but more slender tubercle on the mid-posterior surface of the scute. The free tergites are provided with similar tubercles as shown in Fig. 555. Sternites smooth apart from rows of small pustules. Genital operculum with a few pustules near the anterior margin.

Genitalia. The aedeagus is slender, distended apically, with a short accessory rod on the ventral sub-distal surface. The anterior margin of the ventral plate is evenly rounded, superior seta only slightly stronger than inferior setae. (Fig. 557).

Chelicerae. There is a small tubercle on the inner disto-dorsal surface of the basal



FIGS. 555-560 *Cenefia westlandica* n.sp.

Fig. 555 Dorsal surface body of male; Fig. 556 Lateral view eyemound male; Fig. 557 Male genitalia; Fig. 558 Pro-lateral surface of male pedipalp; Fig. 559 Pro-lateral surface female pedipalp; Fig. 560 Trochanter and femur of leg 1.

segment and a row of similar tubercles along the dorsal surface of the second segment.

Pedipalps. As shown in Fig. 558, with a double row of tubercles on the ventral surface of the femur.

Legs. There are strong conical tubercles on the ventral surface of coxa 1 and the proximo-ventral surface of femur 1, but legs otherwise with only small tubercles. Tarsal formula 2.4.3.3.

Measurements.

		Scute	Length	2.24	Width	2.07		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 .	0.66	0.31	0.92	0.48	0.84	0.79	0.22	4.22
Leg 2 ..	1.01	0.31	1.89	0.66	1.85	1.94	0.75	8.41
Leg 3 ..	0.88	0.26	1.14	0.53	1.14	1.32	0.26	5.53
Leg 4 ..	1.23	0.40	1.94	0.53	1.58	2.20	0.35	8.23
Pedipalp ..		0.26	1.32	0.66	0.92		0.62	3.78
Chelicera ..		Basal	0.66	Second	0.88			1.54

Female. Similar to male in structure. The pedipalp is more slender and shows minor differences in the number and relative size of tubercles (Fig. 559).

Measurements.

		Scute	Length	2.20	Width	2.02		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.44	0.26	0.92	0.44	0.75	0.70	0.22	3.73
Leg 2 ..	0.84	0.40	1.76	0.70	1.50	1.54	0.57	7.31
Leg 3 ..	0.75	0.35	1.32	0.53	1.10	1.19	0.31	5.55
Leg 4 ..	1.06	0.44	1.72	0.62	1.58	1.85	0.40	7.67
Pedipalp ..		0.26	0.97	0.62	0.70		0.35	2.90
Chelicera ..		Basal	0.44	Second	0.66			1.10

Types. Holotype male, Woodpecker Bay, Westland, January 19, 1950, R. R. Forster, (C.M.A. 182); Allotype female, same data (C.M.A. 183); Paratypes, same data, 4 ♂, 8 ♀, 3 imm. (C.M.A. 184, D.M.2/265); same locality, January 22, 1950, R. R. Forster, 1 ♂, 1 ♀, 3 imm. (C.M.A. 192).

Records. Kiwi Valley, off Lewis Pass, November 14, 1949, R. R. Forster, 2 ♀ (C.M.A. 196); Mount Davie, Greymouth, January 24, 1950, R. R. Forster, 1 ♂, 2 ♀ (C.M.A. 193); Marsden Road, Greymouth, November 1, 1950, L. P. Hughson, 3 ♀ (C.M.A. 692); Moana, March 10, 1950, R. R. Forster, 1 ♀ (C.M.A. 195); Okarito, December 7, 1949, R. R. Forster, 1 ♂ (C.M.A. 194); Lower Eglinton Valley, February 4, 1946, R. R. Forster, 1 ♀ (D.M. 2/289).

Remarks. Separated from *adaeiformis* by the shorter ocular tubercle, the absence of a pair of tubercles on Area 3 and the presence of a strong elongate tubercle on each anterior corner of the carapace.

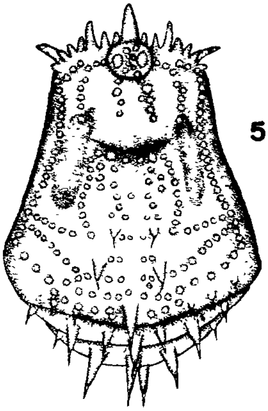
Cenefia sorenseni n.sp.

Figs. 561–566

Male.

Colour. The general colour is reddish-brown with a dark patch on the median sub-lateral surfaces of the scute.

Body. The dorsal pattern is shown in Fig. 561. The eyemound is low, with a few apical pustules but lacking an apical tubercle (Fig. 562). The anterior margin of the carapace is provided with from 15–17 spinous tubercles, the median tubercle is the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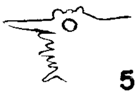
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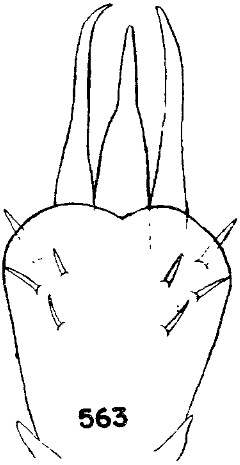
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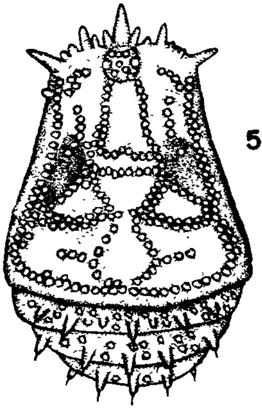
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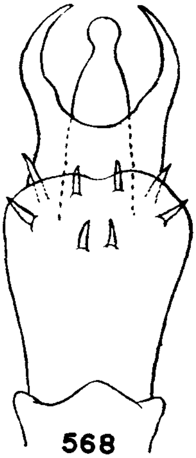
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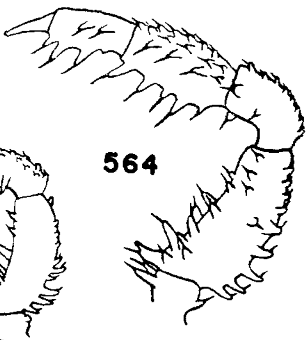
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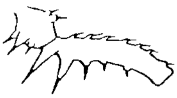
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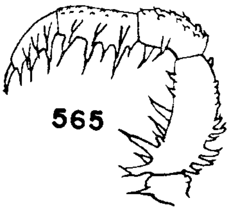
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FIGS. 561-566 *Cenefia sorenseni* n.sp.

Fig. 561 Dorsal surface body of male; Fig. 562 Lateral view eyemound of male; Fig. 563 Male genitalia; Fig. 564 Pro-lateral surface male pedipalp; Fig. 565 Pro-lateral surface female pedipalp; Fig. 566 Trochanter and femur of leg I.

FIGS. 567-568 *Cenefia sorenseni hawea* n.s.sp.

Fig. 567 Dorsal surface body of male; Fig. 568 Male genitalia.

stronger, with a further strong tubercle on the mid-lateral and lateral positions. The scutal groove is distinct on the median surface. The tergal areas are not defined by transverse grooves. There is a pair of conical tubercles on the median surface of Areas 2 and 3 and a much stronger conical tubercle on the median surface of the posterior margin of the scute. The free tergites are provided with similar conical tubercles as shown in Fig. 561.

Genitalia. As shown in Fig. 563. The aedaegus narrows apically to terminate sharply and is provided with two spinous lateral processes, slightly curved apically, which extend beyond the tip. The ventral plate is entire with a shallow antero-median notch, superior seta stronger than the three inferior setae.

Pedipalps. As shown in Fig. 564, with a single row of spinous tubercles on the dorsal surface of the femur.

Legs. Typical. Trochanter and femur of leg 1 as shown in Fig. 566. Tarsal formula 2.4.3.3.

Measurements.

		Scute	Length	2.42	Width	2.29		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.57	0.31	0.92	0.53	0.70	0.79	0.26	4.08
Leg 2 ..	1.06	0.31	1.76	0.79	1.63	1.85	0.53	7.93
Leg 3 ..	0.92	0.31	1.19	0.53	1.10	1.23	0.26	5.54
Leg 4 ..	1.14	0.40	1.58	0.53	1.36	2.07	0.48	7.56
Pedipalp ..		0.22	1.45	0.75	0.92		0.62	3.96
Chelicera ..	Basal	0.57	Second	0.84				1.41

Female. Similar in general structure. The pedipalp is smaller, with a single row of tubercles on the ventral surface of the femur (Fig. 565).

Measurements.

		Scute	Length	2.20	Width	2.07		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.48	0.26	0.79	0.44	0.66	0.70	0.22	3.55
Leg 2 ..	0.92	0.31	1.32	0.70	1.32	1.58	0.53	6.68
Leg 3 ..	0.88	0.26	0.97	0.48	0.92	1.19	0.31	5.01
Leg 4 ..	1.10	0.31	1.36	0.53	1.36	1.76	0.40	6.82
Pedipalp ..		0.22	1.10	0.70	0.62		0.62	3.26
Chelicera ..	Basal	0.48	Second	0.79				1.27

Types. Holotype male, Orepuki, Southland, May 1, 1949, J. H. Sorensen, (C.M.A. 185); Allotype female, same data (C.M.A. 186); Paratypes: same data, 8 ♂, 12 ♀ (C.M.A. 197).

Records. Taieri, Dunedin, January 26, 1951, R. R. Forster, 2 ♀ (C.M.A. 189); Dunedin, November 13, 1937, B. J. Marples, 1 ♀ (D.M.2/267); Dunedin Bush, January 12, 1938, B. J. Marples, 2 ♀ (D.M.2/268); Tapanui, Otago, January 25, 1951, R. R. Forster, 1 ♂ (C.M.A. 190); Lake Manapouri, February 6, 1946, R. R. Forster, 2 ♀ (D.M.2/271).

Remarks. The absence of a strong ocular tubercle distinguishes this species from both *westlandica* and *adaeiformis*.

Cenefia sorenseni hawea n.s sp.

Figs. 567–568

Male.

Similar in colour to *sorenseni*. The dorsal pattern is strongly developed (Fig. 567). The strong tubercle present on the median surface of the posterior margin of the scute in *sorenseni* is lacking. There are no tubercles present on Areas 3 and 4. The free tergites are provided with strong conical tubercles but these are relatively smaller than in *sorenseni* (Fig. 567). The genitalia is similar in form to *sorenseni* but the apical portion of the aedaegus is distended, and the lateral processes are curved more strongly (Fig. 568).

Measurements.		Scute	Length	2.64	Width	2.68		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.53	0.35	1.14	0.53	0.75	0.79	0.26	4.35
Leg 2 ..	1.23	0.40	1.98	0.92	1.76	0.98	0.66	7.93
Leg 3 ..	1.10	0.35	1.19	0.62	1.19	1.36	0.31	6.12
Leg 4 ..	1.32	0.44	1.89	0.84	1.54	2.20	0.35	8.58

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Pedipalp ..		0.26	1.36	0.70	1.10		0.75	4.17
Chelicera ..		Basal	0.53	Second	0.88			1.41

Types. Holotype male, Meads Landing, Lake Hawea, January 21, 1951, R. R. Forster (C.M.A. 187); Paratype, same data, 1 ♂ (C.M.A. 188).

Remarks. The absence of tubercles from the tergal region of the scute distinguishes this sub-species from *sorenseni.*

Cenefia delli n.sp.

Figs. 569–572

Female.

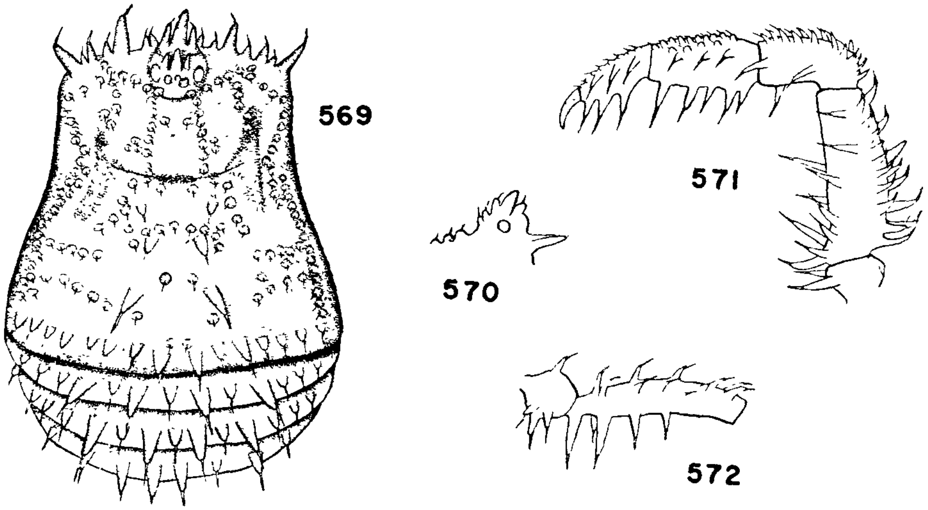
Colour. General colour reddish-brown with a black patch on each mid-lateral surface of the scute extending evenly each side of the scutal groove.

Body. The eyemound is low with a transverse group of three apical tubercles, median being strongest (Fig. 570). The dorsal pattern is poorly developed as shown in Fig. 569. The anterior margin of the carapace is provided with seventeen spinous tubercles; the three median tubercles merge into the base of the eyemound, the mid-lateral and lateral tubercles are strong (Fig. 569). The scutal groove is present on the median surface. The tergal areas are not separated by transverse grooves. Areas 1–3 with a median pair of tubercles, small and rounded on Area 1, conical and stronger on Areas 2 and 3. The posterior margin of the scute and the free tergites are provided with prominent tubercles as shown in Fig. 569. Sternites and genital operculum with small pustules.

Chelicerae. There is a digitate tubercle on the disto-dorsal surface of the basal segment and a few low tubercles on the dorsal surface of the second segment.

Pedipalps. As shown in Fig. 571.

Legs. All segments other than metatarsi and tarsi are closely covered with small



FIGS. 569-572 *Cenefia delli* n.sp.
Fig. 569 Dorsal surface body of female; Fig. 570 Lateral view eyemound of female; Fig. 571 Pro-lateral view eyemound of female; Fig. 572 Trochanter and femur of leg I.

slender, conical tubercles. The tubercles on the ventral surfaces of the trochanter and femur are more elongate (Fig. 572). Tarsal formula 2.4.3.3.

Measurements.

		Scute	Length	2.68	Width	2.46		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.66	0.44	1.50	0.66	1.10	1.10	0.44	5.90
Leg 2 ..	1.10	0.44	2.42	0.88	2.24	2.42	0.70	10.20
Leg 3 ..	0.97	0.44	1.54	0.70	1.45	1.41	0.44	6.95
Leg 4 ..	1.32	0.53	2.42	0.84	1.98	2.73	0.57	10.39
Pedipalp ..		0.35	1.32	0.79	0.88		0.66	4.00
Chelicera ..	Basal	0.57	Second	0.79				1.36

Types. Holotype female, Kaihinu, Tararua Range, 1,500 feet, June 19, 1948, R. K. Dell (D.M.2 266).

Remarks. The single specimen described above is the only record of this genus from the North Island. It is most closely related to *westlandica* from which it may be separated by the three ocular tubercles and the presence of a pair of tubercles on Area 3.

Genus *PRISTOBUNUS* Roewer, 1931

1920 *Triaenobunus* Soerensen (Part) Hogg, Proc.Zool.Soc. London, p.36.
1931 *Pristobunus* Roewer, Zeits.f.zool., 138, (1), p.177.
1932 *Triaenobunus* Soerensen, Phillipps and Grimmett, Proc.Zool.Soc. London, p.733.

Eyemound projecting obliquely forward from the anterior margin of the carapace in the form of a strong spine with a number of side-branches. The anterior margin of the carapace with strong tubercles. Scute with rows of pustules which form a closed pattern. Posterior margin of the scute and free tergites with a transverse row of tubercles. Genital operculum smooth. Sternum strongly forked posteriorly. Chelicerae and pedipalps weak. Legs usually strongly armed, always tuberculate. Tarsus 1 always with 2 segments; Tarsi 2–4 with 2.2.2.; 2.2.3 or 3.3.3 segments. Calcaneus small, sometimes barely discernible. Side branches of claws 3 and 4 much smaller and weaker than median prong. Sexual dimorphism slight or absent.

Genotype (monotypy) *Triaenobunus acuminatus* Hogg, 1920

Pristobunus is readily separated from *Triaenobunus* by the much more complex eyemound of the former, but is closely related to the Australian genus *Dipristes* Roewer 1931, also from Australia, from which it is at present separated by its slightly greater tarsal count (3.5.4.4). Further investigation of the Australian fauna may well result in the fusion of these two genera.

Key to the Species of Pristobunus

1. Tarsal formula 2.2.3.3. 2
Not as above 14
2. Eyemound with a single pair of lateral branches behind the eyes. 3
Eyemound with two or more branches behind the eyes 10
3. Legs strongly tuberculate. 4
Legs weakly tuberculate 6
4. Tubercles on posterior margin of scute conical. 5
Tubercles on posterior margin of the scute rounded. .*henopoeus ileticus* n.s.sp.

5. Tubercles on anterior margin of the carapace mainly fused at the base, eyemound with from 4–5 pairs of lateral branches in front of the eyes........ .... *ignavus* n.sp.
Tubercles on anterior margin of the carapace not fused; eyemound with three pairs of lateral branches in front of the eyes......*acuminatus tragulus* n.s.sp.
6. Tubercles on posterior margin of the scute rounded.....................7
Tubercles on posterior margin of the eyes conical..........................8
7. Pustules forming the dorsal pattern fused to each other..*acentrus hilus* n.s.sp.
Pustules forming dorsal pattern not fused to each other..........*hadrus* n.sp.
8. Eyemound long and slender, from 2½–4 times as long as wide at the base....9
Eyemound relatively short, length less than twice the width at the base...... .... *acentrus* n.sp.
9. Pustules forming dorsal pattern separated from each other except on lateral rows, and white in colour..................................*heterus* n.sp.
Pustules contiguous but not fused, of same colour as scute....*ceratias* n.sp.
10. Two pairs of lateral branches behind the eyes............................11
Three or more pairs of lateral branches behind the eyes...............13
11. Posterior margin of the scute with conical tubercles; dorsal pattern well defined 12
Posterior margin of the scute with low rounded tubercles, tergal region closely covered with pustules which obscure the pattern....*acentrus insulanus* n.s.sp.
12. Pustules forming the dorsal pattern completely fused to each other........ ....*laminus* n.sp.
Pustules forming dorsal pattern clearly visible..*acuminatus acantheis* n.s.sp.
13. Three pairs of lateral branches present behind the eyes....*acuminatus* (Hogg)
Four pairs of lateral branches behind the eyes......................... ....*acuminatus hamiltoni* (Phillipps and Grimmett)
14. Tarsal formula 2.2.2.3...15
Tarsal formula 2.3.3.3.........................*acentrus nodosus* n.s.sp.
Tarsal formula 2.2.2.2...............................*henopoeus* n.sp.
15. Tubercles on posterior margin of the scute and the free tergite conical...... .... *synaptus* n.sp.
Tubercles on the posterior margin of the scute and free tergites sub-spherical ....*henopoeus pelorus* n.s.sp.

Pristobunus acuminatus (Hogg, 1920)

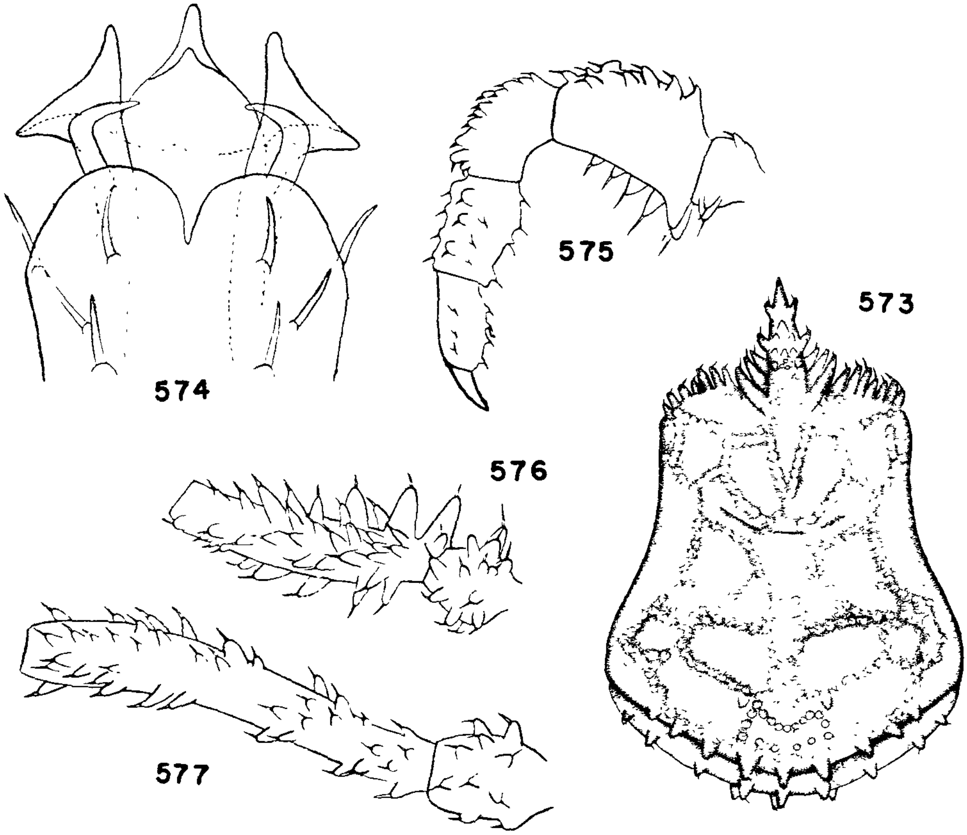
1920 *Triaenobunus acuminatus* Hogg, Proc. Zool. Soc. London, p.36.
1931 *Pristobunus acuminatus* (Hogg), Roewer, Zeits.f.zool. 138, (1), p.177.

Figs. 573–577

Female.

Colour. General colour reddish-brown. Dorsal surfaces of chelicerae and pedipalps with reticulate black markings.

Body. Dorsal pattern as in Fig. 573. The pustules are not fused to each other and the ridges are low. On each side of the eyemound the anterior margin of the carapace is armed with six digitate tubercles. The length of the eyemound is equal to two-fifths of the width at the base and one-third of the length of the scute. There are five pairs of lateral branches of which the three proximal pairs are strong and reach the level of the eyes. Posterior margin of the scute and free tergites with a row of



FIGS. 573-577 *Pristobunus acuminatus* (Hogg)
Fig. 573 Dorsal surface body of male; Fig. 574 Male genitalia; Fig. 575 Pro-lateral surface male pedipalp; Fig. 576 Trochanter and femur leg 1 of male; Fig. 577 Trochanter and femur leg 4 of male.

short but stout conical tubercles. Sternites smooth. Genital operculum with a few small pustules.

Genitalia (Fig. 574). The aedaegus is stout but narrows distally. The anterior margin of the ventral plate has a deep median indentation. There is a strong spinous lateral process which is curved sharply inwards for the distal third.

Chelicerae. Minute tubercles are present on the inner disto-dorsal surface of the basal segment and the proximo-dorsal surface of the second segment.

Pedipalps (Fig. 575). Trochanter with two small ventral tubercles and a single dorsal. Femur with a row of five tubercles on the pro-dorsal and three on the disto-dorsal surface. A strong, evenly bifid tubercle on proximo-ventral surface is followed by four further tubercles. Dorsal surfaces of patella and tibia with small tubercles. There are four small tubercles on retro-ventral surface of tibia, four on pro-ventral surface of tibia and both ventral surfaces of tarsus.

Legs. Small rounded tubercles on ventral surface of coxa. Lateral margins of coxae II-IV, each with a row of granules. Retro-lateral surface of coxa II and pro-lateral surface of coxa IV with digitate tubercles. The femora of all legs are armed with strong conical tubercles (Figs. 576, 577). Patellae and tibiae with low tubercles. Tarsal formula 2.2.3.3.

Measurements.

		Scute	Length	3.30	Width	2.86		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.62	0.40	1.19	0.57	0.88	1.14	0.48	5.28
Leg 2 ..	0.88	0.41	2.02	0.88	1.76	2.46	0.84	9.25
Leg 3 ..	0.92	0.31	1.14	0.75	1.32	1.54	0.62	6.60
Leg 4 ..	1.32..	0.66	1.89	0.88	1.94	2.64	0.75	10.08
Pedipalps		0.26	0.66	0.48	0.44		0.40	2.24
Chelicera ..	Basal	0.48	Second	0.75				1.23

Female. Unknown.

Types. Four male syntypes, Hollyford River, 1000 ft., Coll. T. Hall in British Museum Natural History (not seen).

Records. Monkey Flat, Upper Hollyford Valley, December 12, 1944, J. T. Salmon 1 ♂ (D.M.2/242); Homer Saddle, 4,200 ft., January 21, 1946, R. R. Forster (D.M.2/243, two immature).

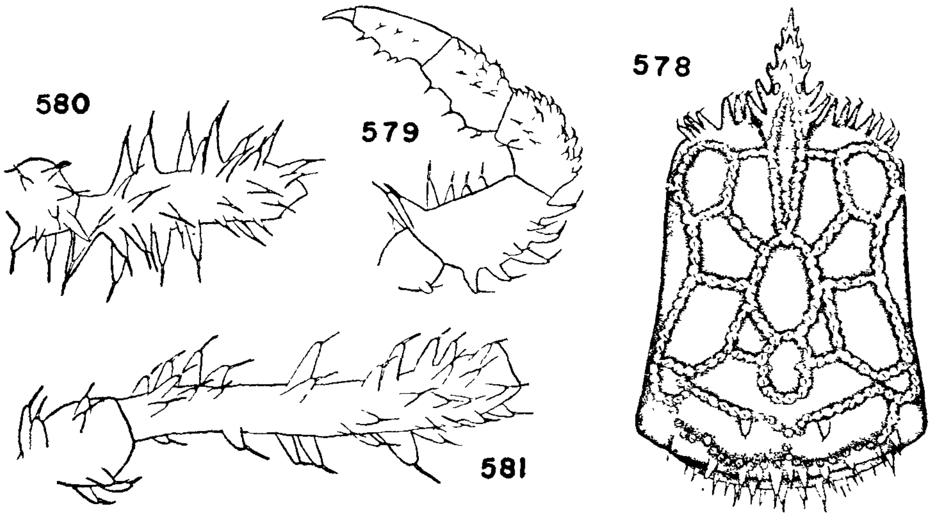
Pristobunus acuminatus acantheis n.s.sp.

Figs. 578–581

Female.

Colour. Dark brown.

Body. Dorsal pattern is similar to that of *acuminatus* differing mainly in the more complete formation of the median cells. There is no scutal groove. The pair of tubercles near the posterior margin of the scute are stronger than in *acuminatus*. The tubercles along the posterior margin of the carapace and the three free tergites



FIGS. 578-581 *Pristobunus acuminatus acantheis* n.s.sp.
Fig. 578 Dorsal surface body of female; Fig. 579 Pro-lateral surface male pedipalp; Fig. 580 Trochanter and femur leg 1 of female; Fig. 581 Trochanter and femur leg 4 of female.

are spinous and more numerous than is found in *acuminatus*. The eyemound is slender, its length being equal to three times that of the width at the base, and is slightly less than one third of the length of the scute. There are five lateral branches, the two pairs behind the eyes are strong, the three anterior pairs smaller (Fig. 578). The sternites are smooth apart from a transverse row of small setose granules. The genital operculum is covered with small pustules.

Chelicerae. As in *acuminatus*.

Pedipalps. Differing mainly from *acuminatus* in that the three disto-dorsal tubercles are much larger and more spinous in appearance (Fig. 579).

Legs. Coxae as in *acuminatus*. Trochanter to tibia of all legs armed with strong spines (Figs. 580, 581), stronger and more prominent than in *acuminatus*. Tarsal formula 2.2.3.3.

Measurements.

		Scute	Length	3.08	Width	2.68		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.66	0.40	1.01	0.53	0.75	0.97	0.48	4.80
Leg 2 ..	0.97	0.40	1.76	0.79	1.58	2.24	0.70	8.44
Leg 3 ..	0.97	0.44	1.10	0.62	1.10	1.45	0.53	6.21
Leg 4 ..	1.19	0.48	1.76	0.79	1.63	2.42	0.70	8.97
Pedipalp ..		0.40	0.57	0.44	0.40		0.40	2.21
Chelicera ..		Basal	0.57	Second	0.79			1.36

Male. Unknown.

Types. Holotype female, Okarito, December 7, 1949, R. R. Forster (C.M.A. 138); Paratype female, 12-mile, Greymouth, March 20, 1953, L. P. Hughson (C.M.A. 943).

Remarks. Separated from *acuminatus* by the more complete dorsal pattern, the position of the lateral branches of the eyemound and the more slender and more numerous tubercles on the posterior margin of the scute and on the free tergites.

Pristobunus acuminatus tragulus n.s.sp.

Figs. 582–586

Male.

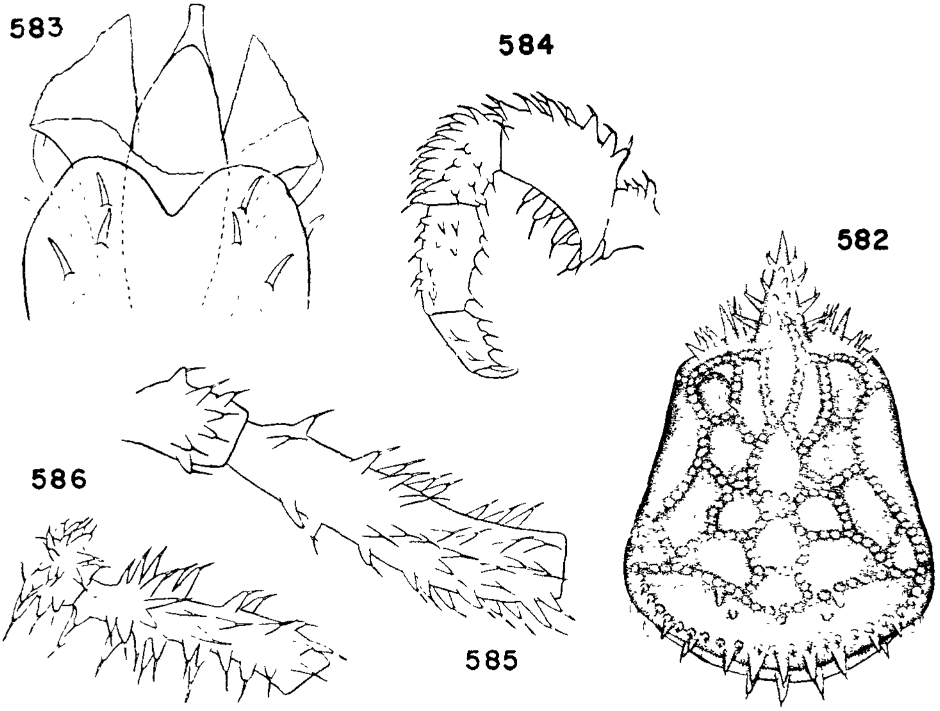
Colour. General colour chocolate brown, with black markings on the lateral and posterior margins of the scute. Black patch present on the lateral margins of the last tergite.

Body. The dorsal pattern is as shown in Fig. 582, but the pustules forming the ridges are fused to one another. The tubercles on the anterior margin of the carapace are as in *a.acantheis*. The eyemound is slender, its length equal to three times the width at its base, and slightly more than one-third of the length of the scute. There are four pairs of sharp, slender lateral branches, the proximal pair being posterior to the eyes. The tubercles on the posterior margin of the scute and the three free tergites are disposed as in *acuminatus* but are longer and more slender.

Genitalia (Fig. 583). The ventral plate is more broadly notched on the anterior margin than in *acuminatus*. The aedaegus is similar in form but more slender. The lateral processes are bent but are not as strong as in *acuminatus*.

Chelicerae. As in *acuminatus*.

Pedipalps. The spination is similar to that of *a.acantheis*, but with five tubercles on the ventral surface of the femur apart from the proximal bifid tubercle. The tubercles on the dorsal surface of the patella are stronger (Fig. 584).



FIGS. 582-586 *Pristobunus acuminatus tragulus* n.s sp.
Fig. 582 Dorsal surface body of male; Fig. 583 Male genitalia; Fig. 584 Pro-lateral surface male pedipalp; Fig. 585 Trochanter and femur leg 1 of male; Fig. 586 Trochanter and femur leg 4 of male.

Legs. Heavily covered with spinous tubercles which are more slender than those of *acuminatus* and shorter than those of *a.acantheis* (Figs. 585, 586). Tarsal formula 2.2.3.3.

Measurements. Scute Length 2.86 Width 2.38

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 .	0.57	0.44	1.14	0.53	0.84	0.97	0.48	4.97
Leg 2 ..	0.79	0.53	1.94	0.75	1.67	2.38	0.84	8.90
Leg 3 ..	0.75	0.44	1.01	0.66	1.14	1.54	0.53	6.07
Leg 4 .	1.19	0.44	1.80	0.66	1.72	2.64	0.75	9.20
Pedipalp		0.22	0.66	0.44	0.48		0.35	2.15
Chelicerae	Basal		Basal	0.53	Second	0.84		1.37

Types. Holotype male, Cass Bush, January, 1938, B. J. Marples (C.M.A. 134).

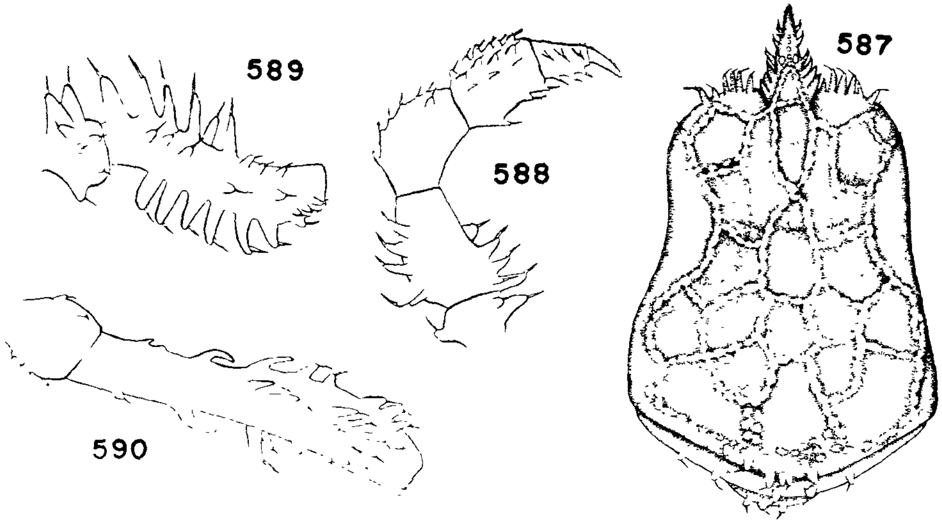
Remarks. This sub-species can be distinguished by the single pair of lateral branches behind the eyes.

Pristobunus acuminatus hamiltoni (Phillipps and Grimmett, 1932)

1932 *Triaenobunus hamiltoni* Phillipps and Grimmett, Proc.Zool.Soc. London, p.733.
Figs. 587–590

Female.

Colour. General colour brown, with black markings on the lateral margin of the scute.



FIGS. 587-590 *Pristobunus acuminatus hamiltoni* (Phillipps and Grimmett)
Fig. 587 Dorsal surface body of female; Fig. 588 Pro-lateral surface male pedipalp; Fig. 589 Trochanter and femur leg 1 of male; Fig. 590 Trochanter and femur leg 4 of male.

Body. Dorsal pattern as shown in Fig. 587. The pustules are small and fused, each with a small pale lateral seta. The anterior margin of the carapace is provided with from 5–6 slender digitate tubercles on each side of the eyemound. The eyemound is relatively small, its length is three times the width at the base and equal to one-third of the length of the scute. There are six pairs of lateral branches, the four stronger pairs behind the eyes. The posterior margin of the scute and the free tergites are provided with a few small tubercles, grouped mainly on the median surface. Sternites each with a row of small granules. Genital operculum with a few small pustules.

Chelicerae. There are minute tubercles on the inner disto-dorsal surface of the basal segment and the proximo-dorsal surface of the second segment.

Pedipalps (Fig. 588). Trochanter with a strong conical ventral spine and two smaller ventral tubercles. There are two rows of prominent tubercles on the dorsal surface of the femur, four tubercles along the proximal half of the ventral surface, the fourth somewhat stouter and more rounded than the first three. There is a small rounded tubercle on the pro-lateral surface of the proximal tubercle. Numerous small tubercles are present on dorsal surfaces of the patella and tibia. Both pro- and retro-ventral margins of tibia and tarsus with three small tubercles.

Legs. Ventral surface of coxa 1 with two distal tubercles. Legs strongly tuberculate (Figs. 589, 590). Tarsal formula 2.2.3.3.

Measurements.

Scute Length 2.99 Width 2.64

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	0.62	0.26	0.79	0.57	0.66	0.66	0.31	3.87
Leg 2	0.84	0.31	1.32	0.75	1.14	1.45	0.40	6.21
Leg 3	0.70	0.26	0.88	0.62	0.97	1.19	0.44	5.06
Leg 4	1.45	0.40	1.36	0.70	1.32	1.89	0.53	7.65

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Pedipalp ..		0.22	0.57	0.40	0.44		0.26	1.89
Chelicera ..		Basal	0.35	Second	0.75			1.10

Types. Lectotype female, Ohakune, November 11, 1920, H. Hamilton (D.M.2/11); Syntypes, three females, same data (D.M.2/240-241).

Records. Te Aroha Mountain, 4,500 feet, May 5, 1946, J. T. Salmon, one ♀, (D.M. 2/244); Feilding, Waikato, December 26, 1949, R. R. Forster, one ♀, (C.M.A. 143).

Remarks. I have placed this form with the '*acuminatus* group' until such time as the male genitalia is available for examination. It appears to be most closely related to *acuminatus*, separated from it by the more complete dorsal pattern, and fewer and smaller tubercles on the posterior margin of the scute and free tergites.

The type material (four females) was deposited in the Dominion Museum by Mr. R. E. R. Grimmett. All specimens are damaged and I have chosen the more complete specimen as Lectotype.

Pristobunus acentrus n.s.sp.

Figs. 591–595

Male.

Colour. The dorsal surface of the body is dark brown, in some specimens almost black. Ventral surface reddish brown with a black patch on each lateral margin of the anal plate. Appendages pale reddish-brown with a few irregular blackish markings.

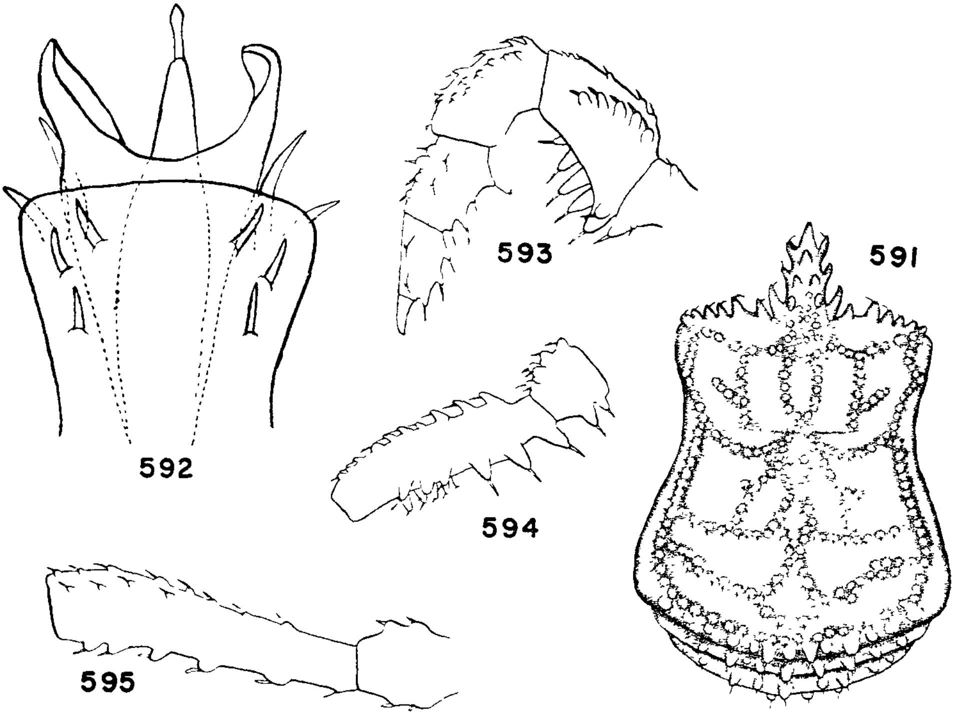
Body. The dorsal pattern as in Fig. 591. Ridges are formed by small pustules which are separate except for the lateral longitudinal rows in which they are contiguous but do not fuse. Each pustule is provided with a small blunt, lateral seta. On each side of the carapace the anterior margin of the cephalothoracic carapace is provided with from six to seven conical tubercles, each with a short terminal seta. The eyemound is directed forward from near the anterior margin of the carapace and is equal to one-third of the length of the scute. There is a pair of strong lateral branches behind the eyes and two further distal pairs, one at about mid-length, the other at two-thirds. The median apical spine is short, only slightly longer than the distal lateral branches. Pustules extend up between the eyes and there are a few small tubercles beyond the eyes. Posterior margin of the scute and the free tergites each with a transverse row of tubercles. The median tubercles are conical, otherwise rounded. Sternites smooth. Genital operculum covered with small setose pustules.

Genitalia. As in Fig. 592. Ventral plate entire. First superior seta twice as long as second.

Chelicerae. There is a strong digitate tubercle on inner disto-dorsal surface of basal segment; a smaller spinous tubercle on the proximo-dorsal surface of the second segment, followed by a few low tubercles on the distal surface.

Pedipalps (Fig. 593). Trochanter with a strong conical tubercle on the ventral surface and a low rounded tubercle on the dorsal surface. Femur with two rows of tubercles on the dorsal surface, a small tubercle on the proximal pro-ventral surface, and a row of five strong conical tubercles on the retro-ventral surface. Dorsal surface of patella and tibia with low tubercles. Tibia with three small pro-ventral and four retro-ventral tubercles. Tarsus with two pro-ventral and three retro-ventral tubercles.

Legs. Coxa I with small tubercles on the ventral surface of which the distal pair are larger. The latero-ventral margins of coxae II-IV are lined with granules, larger on



FIGS. 591-595 *Pristobunus acentrus* n.sp.

Fig. 591 Dorsal surface body of male; Fig. 592 Male genitalia; Fig. 593 Pro-lateral surface male pedipalp; Fig. 594 Trochanter and femur leg 1 of male; Fig. 595 Trochanter and femur leg 4 of male.

pro-ventral margin of coxa II. Femora of all legs with a row of prominent tubercles on both dorsal and ventral surfaces (Fig. 594), smaller on femur III, sparse on femur IV (Fig. 595). Patellae and tibiae of all legs with small tubercles. Tubercles absent from metatarsi and tarsi. Tarsal formula 2.2.3.3.

Measurements.

Scute Length 2.99 Width 2.60

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.70	0.40	1.06	0.53	0.79	0.92	0.40	4.80
Leg 2 ..	0.97	0.44	1.54	0.66	1.32	1.76	0.70	7.39
Leg 3 ..	0.79	0.48	1.19	0.88	0.62	0.92	0.35	5.23
Leg 4 ..	1.28	0.44	1.54	0.79	1.32	1.89	0.62	7.88
Pedipalp ..		0.26	0.97	0.66	0.48		0.40	2.77
Chelicera ..	Basal	1.57		Second	1.01			2.58

Female.

Smaller than male. The prominent spine on the inner proximo-dorsal surface of the chelicera of the male is represented in the female by a small tubercle.

Measurements.

Scute Length 2.52 Width 2.24

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.48	0.26	0.88	0.48	0.66	0.84	0.26	3.86

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 2 ..	0.79	0.31	1.23	0.66	1.01	1.28	0.53	5.81
Leg 3 ..	0.75	0.31	0.75	0.48	0.70	0.92	0.35	4.26
Leg 4 ..	1.19	0.31	1.14	0.66	1.10	1.45	0.57	6.42
Pedipalp ..		0.20	0.53	0.48	0.40		0.31	1.92
Chelicera ..	Basal	0.66		Second	0.40			1.06

Type Locality. Holotype male, Feilding, December 26, 1948. R. R. Forster (D.M. 2/28); Allotype female, same data (D.M. 2/29); Paratypes from same locality in Canterbury Museum (C.M.A. 102–106), Dominion Museum (D.M. 2/30–31) and American Museum of Natural History, New York.

Records. Dannevirke, April 15, 1943, R. R. Forster (D.M. 2/32); Vinegar Hill Reserve, near Taihape, December 22, 1948, R. R. Forster (C.M.A. 108); Taoroa, Rangitikei River, February, 1950, A. C. O'Connor (C.M.A. 109); Upper Rangitikei, May 18, 1948, J. Ramsay (D.M. 2/214); Raetihi, December 22, 1948, R. R. Forster (C.M.A. 110); Foxton, unknown date, R. E. R. Grimmett (D.M. 2/213); Woodville, February 15, 1952, B. J. Marples (C.M.A. 753); Mangarei, Wairarapa, March 5, 1939, October 20, 1943, September 24, 1944, July 23, 1945, July 3, 1947, C. L. Wilton (D.M. 2/211, 2/233–235, C.M.A. 130).

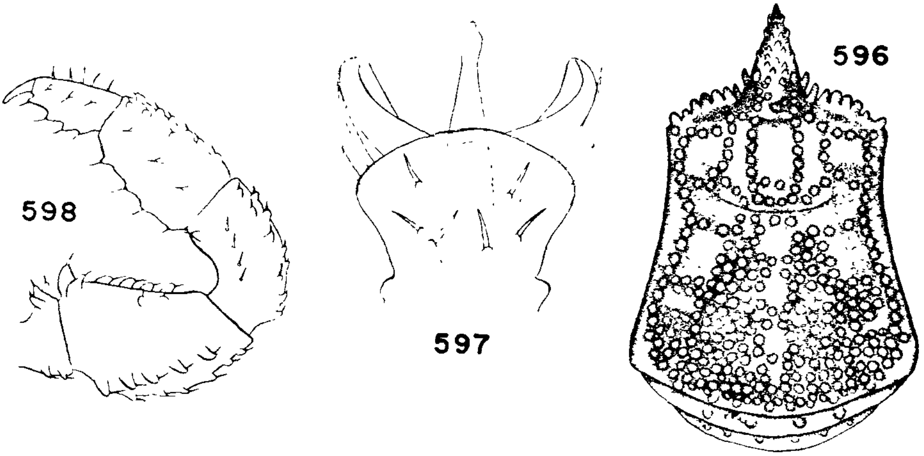
Pristobunus acentrus insulanus n.s.sp.

Figs. 596–598

Male.

Colour. General colour pale-brown. Black patches are present along the anterior and lateral margins of the scute. Dorsal surfaces of chelicerae and pedipalps with black reticulate markings. Small black patch on the lateral margins of the last sternite.

Body. The scute is covered with small pustules as shown in Fig. 596. The pattern is clear on the cephalothoracic carapace but obscured on the tergal region where the surface is almost completely covered with closely spaced pustules. A few of the pustules are provided with short setae but the majority are smooth. The eyemound



FIGS. 596-598 *Pristobunus acentrus insulanus* n.s.sp.
Fig. 596 Dorsal surface of body; Fig. 597 Male genitalia; Fig. 598 Pro-lateral surface male pedipalp.

is relatively broad, the width at the base equals half the length. The length of the eyemound is equal to one-third of the length of the scute. There are two pairs of lateral projections, both behind the eyes. The anterior margin of the carapace on each side of the eyemound is provided with some five to seven blunt, contiguous tubercles. Posterior margin of the scute with a few small tubercles only slightly larger than pustules. Free tergites with a few similar tubercles. Sternites smooth. Genital operculum covered with small setose pustules.

Genitalia. Similar in general structure to *acentrus* (Fig. 597).

Chelicerae. Basal segment with a sharp projection on the proximo-dorsal surface and a small spine on the disto-dorsal surface.

Pedipalps. Differing from *acentrus* in that the four tubercles along the ventral surface of femur are much smaller (Fig. 598).

Legs. As in *acentrus*. Tarsal formula 2.2.3.3.

Measurements.

		Body	Length	2.82	Width	2.42		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.62	0.31	1.14	0.53	0.70	0.84	0.44	4.58
Leg 2 ..	0.84	0.35	1.54	0.66	1.28	1.54	0.53	6.74
Leg 3 ..	0.79	0.26	0.75	0.53	0.84	1.19	0.48	4.84
Leg 4 ..	1.23	0.40	1.54	0.62	1.32	1.94	0.57	7.62
Pedipalp ..		0.26	0.84	0.48	0.62		0.44	2.64
Chelicera ..	Basal	0.48	Second	0.79				1.27

Female. Similar in appearance to male.

Measurements.

		Scute	Length	3.25	Width	2.80		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.62	0.26	1.10	0.53	0.79	1.01	0.44	4.75
Leg 2 ..	0.90	0.39	1.58	0.70	1.36	1.76	0.70	7.39
Leg 3 ..	0.70	0.35	1.14	0.48	0.92	1.19	0.48	5.26
Leg 4 ..	1.14	0.44	1.63	0.84	1.40	1.98	0.66	8.09
Pedipalp ..		0.31	0.75	0.44	0.48		0.39	2.37
Chelicera ..		Basal	0.43	Second	0.80			1.23

Types. Holotype male, Stephen Island, Cook Strait, May 19, 1950, R. R. Forster (C.M.A.111); Allotype female, 12-mile, Greymouth, April 20, 1953, L. P. Hughson (C.M.A.945); Paratypes, 3 ♂, 3 ♀, same data as allotype (C.M.A.944).

Remarks. This sub-species is readily separated from *acentrus acentrus* by the greater number of scutal pustules, the reduction of tubercles on the free tergites and the absence of lateral branches on the eyemound beyond the eyes.

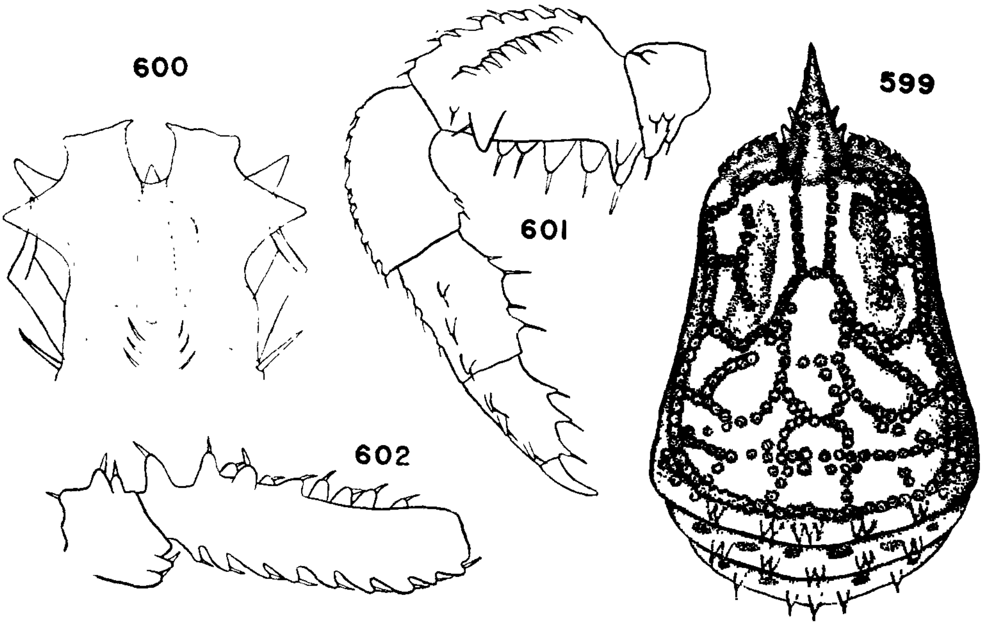
Pristobunus acentrus nodosus n.s.sp.

Figs. 599–602

Male.

Colour. General colour reddish-brown, with a few blackish markings on scute and free tergites.

Body. The scutal pattern is shown in Fig. 599. The pustules are contiguous but are not fused; each pustule is provided with a small apical seta. The anterior margin of the carapace on each side of the eyemound is provided with five or six blunt tubercles as in *a. insulanus*; in some specimens these tubercles are fused to form a



FIGS. 599-602 *Pristobunus acentrus nodosus* n.s.sp.
Fig. 599 Dorsal surface body of male; Fig. 600 Male genitalia; Fig. 601 Pro-lateral surface male pedipalp; Fig. 602 Trochanter and femur leg 1 of male.

projecting ledge. The eyemound is slightly more than twice as long as the width at its base, and one-third of the length of the scute. There are two pairs of small lateral branches posterior to the eyes. Two rows of pustules extend up from the cephalothoracic carapace and meet between the eyes. The surface beyond the eyes is covered with small irregularly placed pustules. Posterior margin of the scute and the free tergites armed with small setose tubercles. The tubercles on the posterior margin of the scute and the first free tergite are placed in groups of two or three (Fig. 599). Sternites smooth. Genital operculum with a few small pustules.

Genitalia (Fig. 600). The ventral plate is deeply notched on the anterior median surface and projects laterally. Aedeagus slender. S1 is very much stouter and longer than S2, distal portion strongly curved.

Chelicerae. Disto-dorsal surface of the basal segment and the proximo-dorsal surface of the second segment with small tubercles.

Pedipalps (Fig. 601). Trochanter with from four to five tubercles on the ventral surface of which only one is prominent and a single small tubercle on the dorsal surface. There are two rows of setose tubercles on the dorsal surface of the femur and five prominent tubercles along the ventral surface, the proximal tubercle with a smaller tubercle on the pro-lateral surface. There is a strong, more spinous tubercle on the distal pro-ventral surface which is followed by a small pustular tubercle. Patella, tibia and tarsus with small setose tubercles on the dorsal surfaces. Tibia with four retro-ventral tubercles, of which the first and third are very small. Pro-ventral surface of tibia and both ventral surfaces of the tarsus with three spinous tubercles.

Legs. Ventral surface of coxa 1 with a few low, rounded tubercles and two stronger, conical tubercles on the pro-distal surface. Latero-ventral margins of coxae 2–4 with a row of granules. Retro-lateral surface of coxa 2 and pro-lateral surface of coxa 4 with a number of small tubercles and one more prominent distal tubercle, which is bifid on coxa 2. The femur of leg 1 is provided with dorsal and ventral rows of conical tubercles (Fig. 602) but the remaining segments of leg 1 and all segments of legs 2–4 with only small rounded tubercles or with granules. Tarsal formula 2.3.3.3.

Measurements.

		Scute	Length	3.39	Width	3.26		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	0.79	0.44	1.28	0.66	0.97	1.10	0.48	5.72
Leg 2	0.97	0.48	1.76	0.88	1.63	2.07	0.70	8.49
Leg 3	1.06	0.44	1.10	0.75	1.28	1.45	0.53	6.61
Leg 4	1.50	0.48	1.85	0.92	1.63	2.29	0.66	9.33
Pedipalps		0.40	1.14	0.84	0.84		0.48	3.70
Chelicera	Basal	0.57	Second	1.01				1.58

Female. Similar to male.

Measurements.

		Scute	Length	3.52	Width	3.26		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	0.48	0.44	1.23	0.70	0.92	1.06	0.48	5.31
Leg 2	0.88	0.48	1.76	0.88	1.58	1.98	0.66	8.22
Leg 3	0.75	0.44	1.23	0.66	1.19	1.50	0.53	6.30
Leg 4	1.32	0.57	1.94	0.79	1.63	2.33	0.66	9.24
Pedipalps		0.22	0.84	0.70	0.48		0.48	2.72
Chelicera	Basal	0.48	Second	0.79				1.27

Types. Holotype male, Mount Arthur Track, N.W. Nelson, January 22, 1948, R. R. Forster (D.M.2/215); Allotype female, same data (D.M.2/216); Paratypes: Flora Camp, January 22, 1948, R. R. Forster (D.M.2/218); Mount Balloon, January 26, 1948, R. K. Dell (D.M.2/217), same locality and date, coll. R. R. Forster (C.M.A.113). All these localities are within a few miles of each other.

Records. Kairuru, near Gates, N.W. Nelson; 1,800 feet, December 1948, A. C. O'Connor (C.M.A.114); Kairuru, December 1951, A. C. O'Connor (C.M.A.115); Canaan, November 1951, A. C. O'Connor (C.M.A.116); South Terrace, Karamea, January 20, 1950, R. R. Forster (C.M.A. 117).

Remarks. This sub-species is separated from both *acentrus* and *a. insulanus* by the grouping of the tubercles along the posterior margin of the scute and the free tergites and by the presence of the strong spinous tubercle on the distal pro-ventral surface of the pedipalp femur.

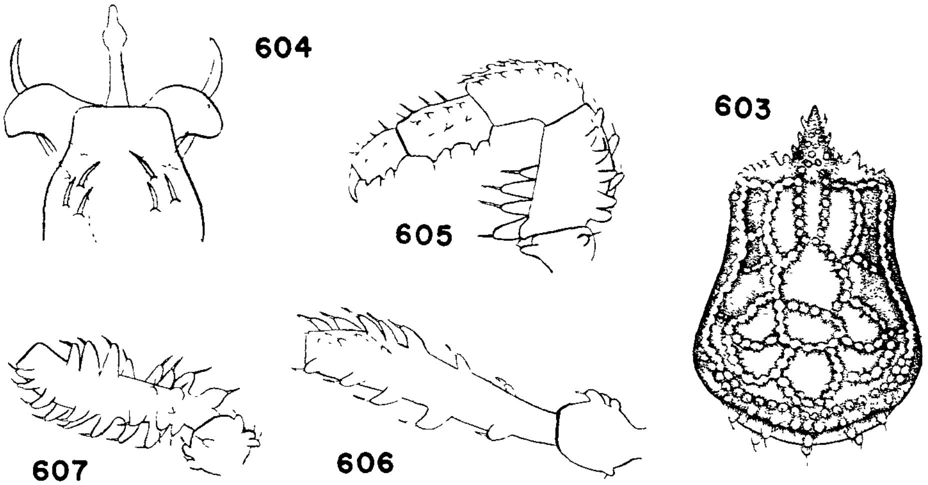
Pristobunus acentrus hilus n.s.sp.

Figs. 603-607

Male.

Colour. General colour pale orange-brown. Eyemound and cephalothoracic carapace somewhat blackish, with a black band extending back down the lateral margin of the tergal region. Lateral margins of sternites blackish. Dorsal surfaces of chelicerae and pedipalps with reticulate black markings.

Body. Dorsal pattern as in Fig. 603. The pustules forming the ridges are fused to one another but retain their individual form, each provided with a small, pale



FIGS. 603-607 *Pristobunus acentrus hilus* n.s.sp.
Fig. 603 Dorsal surface body of male; Fig. 604 Male genitalia; Fig. 605 Pro-lateral surface male pedipalp; Fig. 606 Trochanter and femur leg 4 of male; Fig. 607 Trochanter and femur leg 1 of male.

lateral seta. The anterior margin of the carapace along each side of the eyemound is provided with from 5 to 7 small tubercles, of which the second from the eyemound is the larger and differs from the remainder by being conical rather than rounded in shape. The eyemound is small, being little more than a third of the length of the scute. The width at the base is slightly more than one half of its length. There are three pairs of uniformly developed lateral tubercles, the proximal pair situated at the level of the eyes. There is a row of from nine to eleven low rounded tubercles across the posterior margin of the scute, the median three grouped. The free tergites are provided with fewer, more widely spaced and elongate tubercles. Sternites and genital operculum smooth.

Genitalia (Fig. 604). The distal portion of the aedeagus is slender but is distended sub-apically. The anterior margin of the ventral plate is entire. The velum extends laterally. S1 strongly curved, twice the length of S2.

Chelicerae. Small tubercle on the inner disto-dorsal surface of the basal segment, stronger spinous projection on the inner proximo-dorsal surface of the second segment.

Pedipalps (Fig. 605). Trochanter with prominent ventral tubercle and a smaller rounded dorsal tubercle. Femur with four strong ventral tubercles followed by a fifth smaller tubercle. There is a small rounded tubercle on the pro-lateral surface of the proximal tubercle. Pro-dorsal surface with row of five tubercles and a few smaller tubercles on the retro-dorsal surface. Low tubercles present on dorsal surfaces of patella and tibia. Tibia with three pro-ventral and four retro-ventral tubercles, second and fourth retro-ventral small. Tarsus with two pro-ventral, three retro-ventral tubercles.

Legs. Small tubercles present on ventral surface of coxa I, retro-distal region of coxa II, and pro-distal region of coxa IV. Row of granules along both pro- and and retro-ventral margins of coxae II–IV, more prominent on pro-ventral surface of coxa II. All segments of legs except tarsi with low tubercles arranged in longitudinal rows (Figs. 606, 607). Three prominent tubercles on proximo-ventral surface of femur I. Tarsal formula 2.2.3.3.

Measurements.

		Scute	Length	2.33	Width	1.85		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.44	0.26	0.70	0.44	0.53	0.62	0.31	3.30
Leg 2 ..	0.66	0.35	1.19	0.57	0.97	1.32	0.57	5.63
Leg 3 ..	0.53	0.26	0.75	0.44	0.75	0.92	0.44	4.09
Leg 4 ..	1.01	0.35	1.28	0.48	1.01	1.58	0.53	6.24
Pedipalp ..		0.22	0.62	0.40	0.44		0.40	2.08
Chelicera ..	Basal	0.48	Second	0.66				1.14

Types. Holotype male, Waiheke Island, Hauraki Gulf, January 1945, G. Chamberlain, (D.M.2/236); Paratype male, Titirangi, Auckland, December 19, 1951, T. E. Woodward (C.M.A. 131).

Remarks. The sub-species described above is separated from the nominate form by its smaller size and the more spinous nature of the legs.

Pristobunus henopoeus n.sp.

Figs. 608–612

Male.

Colour. General colour yellowish-brown with blackish markings on lateral margins of scute, free tergites and sternites.

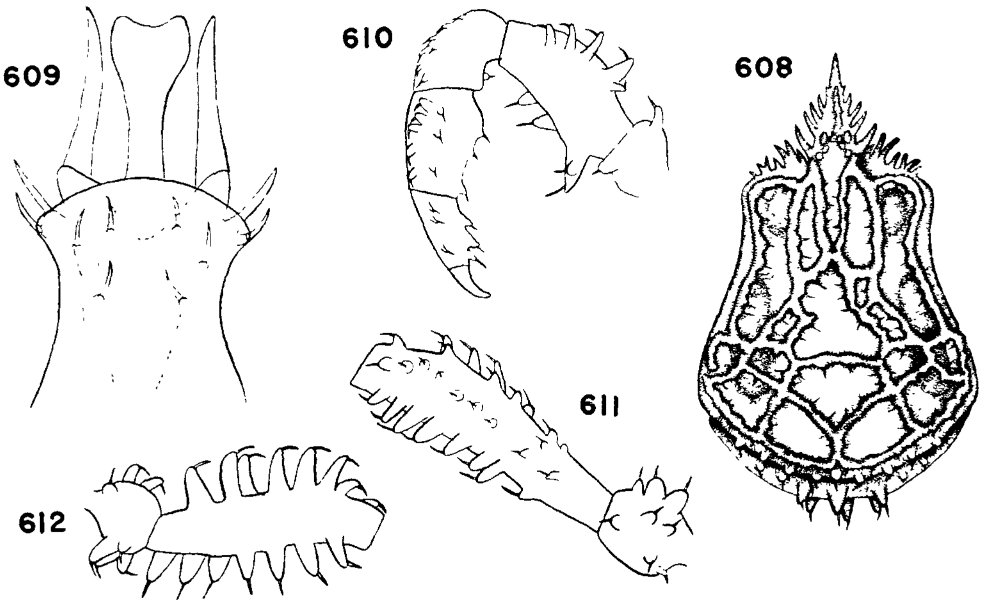
Body. Dorsal pattern as in Fig. 608. Ridges high with the pustules fused. The anterior margin of the carapace on each side of the eyemound with from 7–8 spinous tubercles (among the range of specimens available these are fused to a greater or lesser degree than is shown in Fig. 608). Normally the second and third from the eyemound and the fifth and sixth are fused at the base. The eyemound is long and slender; slightly less than four times the width at the base. The length of the eyemound is equal to half the length of the scute. There are four pairs of slender lateral branches of which one pair is posterior to the eyes. Posterior margin of the scute with a row of small rounded tubercles. Free tergites 1 and 2 with three prominent conical tubercles on the median surface and smaller rounded tubercles laterally. Free tergite 3 with small tubercles. Sternites smooth. Genital operculum with small pustules on the anterior surface.

Genitalia (Fig. 609). Aedeagus spatulate, indented apically; bounded laterally by a pair of strong spinous processes which extend to the apex. Superior setae of the ventral plate relatively small, S2 being two-thirds of the length of S1. The anterior margin of the ventral plate is entire and recurved.

Chelicerae. Basal segment with a small tubercle on the inner disto-dorsal surface of the basal segment and a similar tubercle on the proximo-dorsal surface of the second segment.

Pedipalps (Fig. 610). Trochanter with a small tubercle on both dorsal and ventral surfaces. Femur with a single row of four rather slender tubercles along the dorsal surface. There are three tubercles present on the ventral surface of which the basal is strong, sharp and directed back, bearing a small secondary rounded tubercle on the pro-dorsal surface. Dorsal surfaces of patella and tibia with small tubercles. Both tibia and tarsus with three small tubercles on pro- and retro-ventral surfaces.

Legs. There is a row of small tubercles on the ventral surface of coxa 1 of which the distal two are the larger. Retro-ventral margin of coxa 2 armed with a number of



FIGS. 608-612 *Pristobunus henopoeus* n.sp.
Fig. 608 Dorsal surface body of male; Fig. 609 Male genitalia; Fig. 610 Pro-lateral surface male pedipalp; Fig. 611 Trochanter and femur leg 4 of male; Fig. 612 Trochanter and femur leg 1 of male.

elongate tubercles. Pro-lateral surface of coxa 4 with shorter tubercle. Trochanter and femora of all legs with strong spines, grouped mainly in a dorsal and a ventral row (Figs. 611, 612). Patella and tibia armed with small tubercles. Tarsal formula 2.2.2.2.

Measurements.

		Scute	Length	2.42	Width	2.07		
	Cox.	Troch.	Fem.	Pat.	Tibia	Met.	Tars.	Total
Leg 1 ..	0.48	0.31	1.14	0.48	1.10	1.32	0.40	5.23
Leg 2 ..	0.84	0.31	1.19	0.62	1.01	1.10	0.48	5.55
Leg 3 ..	0.62	0.26	0.66	0.40	0.44	0.66	0.26	3.30
Leg 4 ..	1.10	0.31	1.28	0.57	1.01	1.14	0.53	5.94
Pedipalps		0.20	0.57	0.40	0.44		0.31	1.92
Chelicera ..	Basal	0.40	Second	0.75				1.15

Female.

Does not differ in general structure from the male.

Measurements.

		Scute	Length	2.24	Width	2.07		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.40	0.22	0.70	0.44	0.48	0.48	0.31	3.03
Leg 2 ..	0.66	0.26	1.14	0.57	0.97	1.01	0.35	4.96
Leg 3 ..	0.57	0.26	0.53	0.44	0.66	0.79	0.26	3.51
Leg 4 ..	0.92	0.26	0.92	0.62	0.31	1.19	0.26	4.48
Pedipalps		0.15	0.48	0.31	0.57		0.22	1.73
Chelicera ..		Basal	0.26	Second	0.57			0.83

Types. Holotype male, Days Bay, Wellington, ex. leaf-mould, January 3, 1947, R. R. Forster (D.M.2 225); Allotype female, same data, (D.M.2 226); Paratypes: Days Bay, January 3, 1947, R. R. Forster (C.M.A. 127); June 3, 1946, R. R. Forster (C.M.A. 128); June 25, 1942, R. R. Forster (C.M.A. 129); June 8, 1942, R. R. Forster (D.M.2 232); Butterfly Creek, Wellington, June 2, 1946, R. R. Forster (D.M.2 229); Wellington, date unknown, R. E. R. Grimmett (D.M.2 231).

Records. Blue Mountains, Silverstream, April 18, 1948, J. T. Salmon, (D.M.2 227); Opouawa Gulley, South West Wairarapa, April 5, 1947, R. R. Forster (D.M.2 228).

Pristobunus henopoeus pelorus n.s.sp.

Figs. 613–616

Male.

Colour. Reddish-brown, with blackish shading on lateral margins of the scute and on free tergites.

Body. Dorsal pattern as shown in Fig. 613. The pattern is the most simple found in the *henopoeus* group. The pustules forming the ridges are fused but not as completely as in other sub-species apart from *h.gorensis.* The eyemound is twice as long as it is wide at the base and equal to two-fifths of the length of the scute. It is armed with from four to five lateral branches, one pair behind the eyes and from three to four anterior to the eyes. Anterior margin of the scute provided with four contiguous digitate tubercles each side of the eyemound. Posterior margin of the scute and free tergites with sub-spherical tubercles, small on posterior margin of scute but prominent on free tergites. Genital operculum smooth.

Genitalia. As shown in Fig. 614. Similar to *h.ileticus*, but velum with only a small antero-median notch and lateral spinous processes strongly developed, reaching to the tip of the aedeagus.

Chelicerae. Normal.

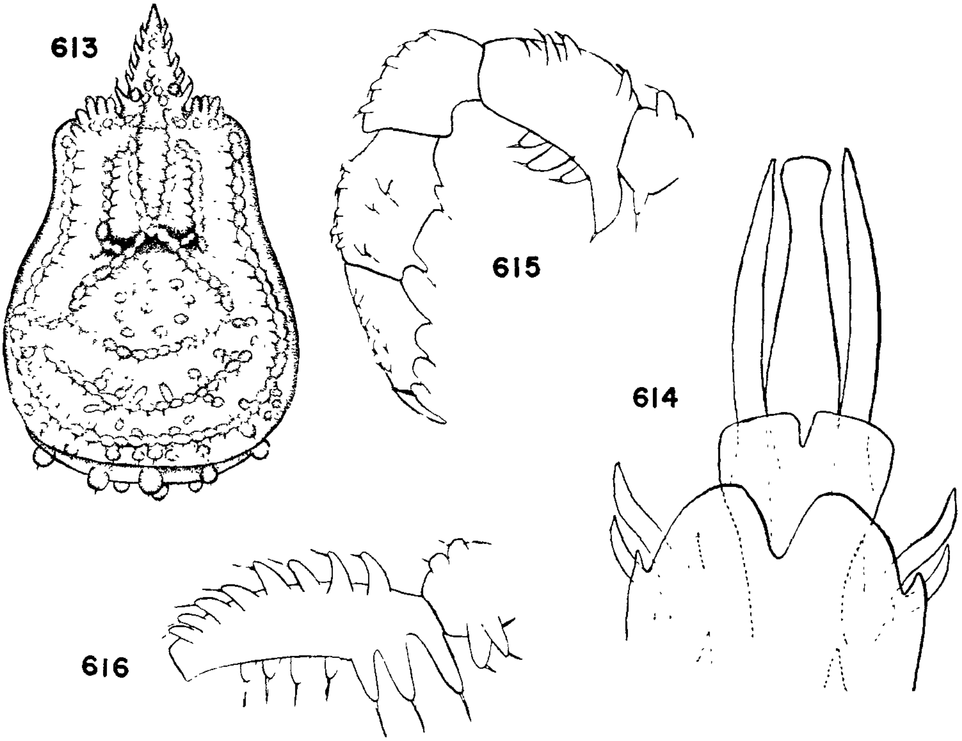
Pedipalps. As shown in Fig. 615. Similar in general structure to *henopoeus*; dorsal surface of femur with single proximal and three median tubercles. Proximo-ventral tubercle stronger than *henopoeus* and followed by three smaller tubercles.

Legs. Only femora 1 and 2 with strong elongate tubercles (Fig. 616) otherwise armed with small tubercles. Tarsal formula 2.2.2.3.

Measurements.		Scute	Length	2.42	Width	1.89		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.44	0.31	0.75	0.44	0.53	0.57	0.31	3.35
Leg 2 ..	0.57	0.35	1.06	0.62	0.84	1.14	0.40	4.98
Leg 3 ..	0.57	0.22	0.48	0.62	0.75	0.62	0.31	3.57
Leg 4 .	0.75	0.31	1.10	0.57	0.92	1.32	0.40	5.37
Pedipalp ..		0.22	0.48	0.31	0.44		0.35	1.30
Chelicera ..	Basal	0.35	Second	0.62				0.97

Female. Structure and coloration similar to male.

Measurements.		Scute	Length	2.33	Width	1.94		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.35	0.22	0.66	0.40	0.44	0.48	0.26	2.81
Leg 2 ..	0.57	0.31	0.84	0.48	0.75	0.92	0.44	4.31
Leg 3 ..	0.53	0.26	0.48	0.40	0.48	0.53	0.26	2.94
Leg 4 ..	0.75	0.26	0.88	0.62	0.92	1.23	0.31	4.97
Pedipalps ..		0.19	0.44	0.26	0.31		0.26	1.46
Chelicera ..	Basal	0.35	Second	0.57				0.92



FIGS. 613-616 *Pristobunus henopoeus pelorus* n.s.sp.
Fig. 613 Dorsal surface body of male; Fig. 614 Male genitalia; Fig. 615 Pro-lateral surface male pedipalp; Fig. 616 Trochanter and femur leg I of male.

Types. Holotype male, Pelorus Bridge, Marlborough, December 17, 1951, R. Pilgrim (C.M.A. 139); Paratype immature, same data, (C.M.A. 140); Allotype female, Poormans Valley, Nelson, September 17, 1948, A. W. Parrott (C.M.A. 141); Paratype female, same data (D.M.2/238).

Remarks. This sub-species may be separated from all other forms by the relatively simple dorsal pattern and the striking sub-spherical tubercles on the free tergites.

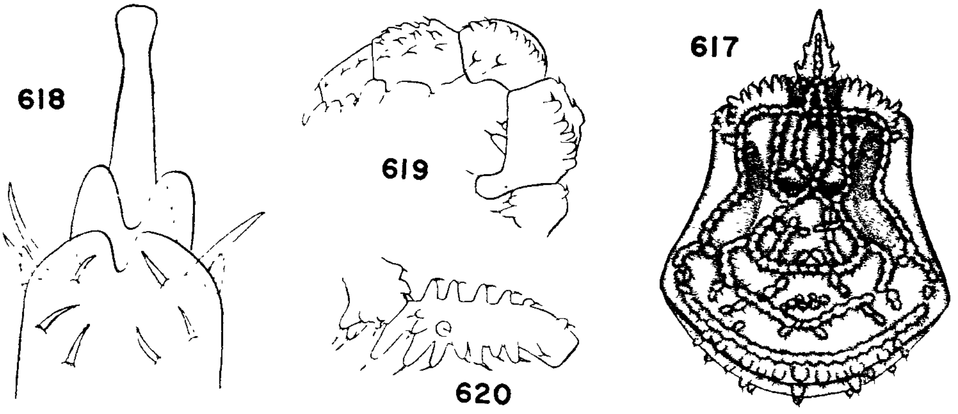
Pristobunus henopoeus ileticus n.s.sp.

Figs. 617–620

Male.

Colour. Similar to *henopoeus*.

Body. The scutal pattern is very similar to that of *h.pelorus* (Fig. 617) but the pustules are more completely fused and the ridges are relatively higher. The tubercles on the anterior margin of the carapace are similar in form to *pelorus* but are more numerous, there being from 6–7 present. The eyemound is slightly more than twice as long as it is wide at the base and is equal to two-fifths of the length of the scute. There are three pairs of small lateral branches, one pair behind the eyes. Two rows of fused pustules extend up the eyemound to fuse into a single ridge at the level of the eyes, which is carried on to near the apical spine. The posterior margin of the scute with a few rounded tubercles. Free tergites with a few more conical tubercles.



FIGS. 617-620 *Pristobunus henopoeus ileticus* n.s.sp.
Fig. 617 Dorsal surface of body; Fig. 618 Male genitalia; Fig. 619 Pro-lateral surface male pedipalp; Fig. 620 Trochanter and femur of leg 1 of male.

Genitalia (Fig. 617). Showing decided affinities to *henopoeus* but the lateral spinous processes are much smaller, barely reaching halfway to the tip of the aedeagus.

Chelicera as in *henopoeus*.

Pedipalps (Fig. 619). Differing from *henopoeus* in possessing a strong rounded and somewhat clubbed tubercle on the proximo-ventral surface of the femur, followed by two normal tubercles. The tubercles forming a row on the pro-dorsal surface are five in number and more rounded than in *henopoeus*.

Legs. Coxae as in *henopoeus*. The femora of all legs with dorsal and ventral rows of tubercles (Fig. 620) which are not as strongly developed as in *henopoeus*. Remaining segments as in *henopoeus*.

Tarsal formula 2.2.3.3.

Measurements.

		Scute	Length	2.29	Width	2.11		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	0.44	0.31	0.84	0.48	0.57	0.62	0.31	3.57
Leg 2	0.66	0.48	1.10	0.66	0.88	1.10	0.48	5.36
Leg 3	0.62	0.31	0.70	0.35	0.60	0.75	0.26	3.59
Leg 4	0.88	0.35	1.19	0.53	1.01	1.32	0.48	5.76
Pedipalp		0.20	0.48	0.40	0.40		0.31	1.79
Chelicera	Basal	0.40	Second	0.62				1.02

Female. Structure as in male.

Measurements.

		Scute	Length	2.29	Width	2.16		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	0.35	0.22..	0.70	0.44	0.48	0.53	0.31	3.03
Leg 2	0.70	0.31	0.62	0.62	0.84	1.06	0.44	4.59
Leg 3	0.53	0.26	0.53	0.40	0.57	0.70	0.31	3.30
Leg 4	0.88	0.31	1.14	0.57	0.92	1.14	0.40	5.36
Pedipalps		0.20	0.40	0.31	0.31		0.22	1.44
Chelicera	Basal	0.35	Second	0.62				0.97

Types. Holotype male, Peel Forest, January 20, 1951, R. R. Forster (C.M.A. 132); Allotype female, same data (C.M.A. 133); Paratypes, Peel Forest, January 16, 1946, J. T. Salmon, 2 ♀ (D.M.2/237).

Remarks. This sub-species is characterized by the presence of only three lateral branches on the eyemound, the relatively small tubercles forming a pro-dorsal row on the femur of the pedipalp and the clubbed tubercle on the proximo-ventral surface.

Pristobunus henopoeus gorensis n.s.sp.

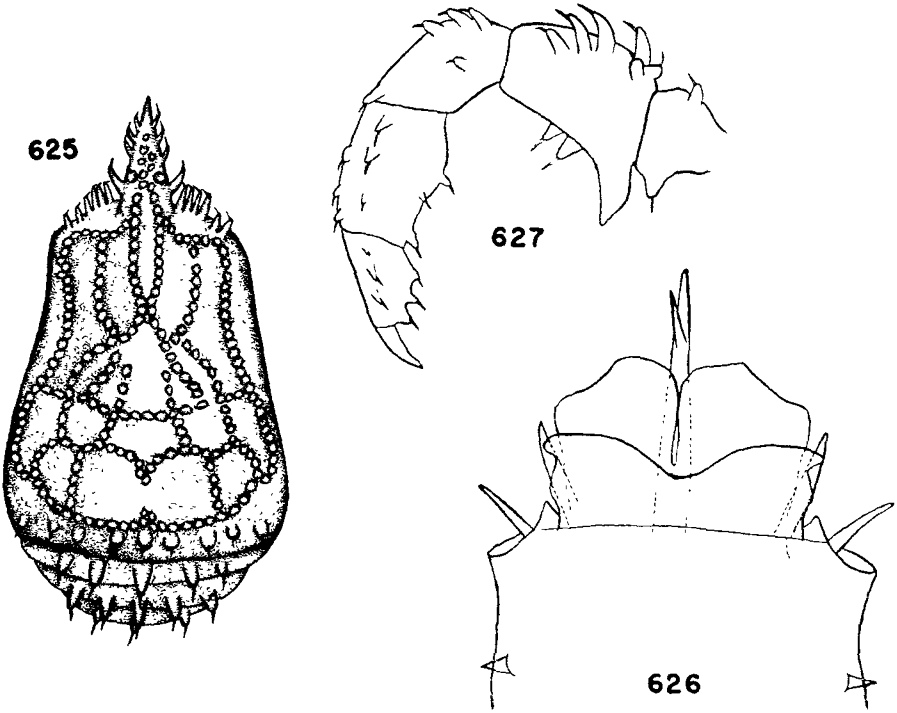
Figs. 625–627

Male.

Colour. Uniform pale-yellow.

Body. Dorsal pattern as shown in Fig. 625. The pustules forming the ridges are only slightly fused. The length of the eyemound is equal to three times the width at the base and less than half of the length of the scute. Four pairs of lateral branches of which the first and largest pair is posterior to the eyes. There are six elongate tubercles on the anterior margin of the carapace each side of the scute. The posterior margin of the scute with rounded tubercles; free tergites with more conical tubercles (Fig. 621).

Genitalia (Fig. 626). The aedeagus is slender, with a sharp, sub-apical accessory spine. Velum with a deep, narrow median incision. Anterior margin of the ventral



FIGS. 625-627 *Pristobunus gorensis* n.sp.
Fig. 625 Dorsal surface body of male; Fig. 626 Male genitalia; Fig. 627 Pro-lateral surface male pedipalp.

plate with a broad indentation. S1 and S2 sub-equal in length, not strongly developed.

Chelicerae. Normal.

Pedipalps (Fig. 627). Similar in structure to *pelorus*, differing mainly in possessing two small accessory tubercles on the proximo-dorsal surface of the femur and only two instead of three tubercles on the mid-ventral surface.

Legs. Armed as in *ileticus*. Tarsal formula 2.2.3.3.

Measurements.

Scute Length 2.55 Width 1.98

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.57	0.26	0.75	0.44	0.53	0.62	0.26	3.43
Leg 2 ..	0.75	0.31	1.10	0.66	0.88	1.10	0.31	5.11
Leg 3 ..	0.70	0.22	0.49	0.44	0.66	0.70	0.27	3.48
Leg 4 ..	0.88	0.31	0.97	0.53	1.01	1.14	0.30	5.14
Pedipalps		1.10	0.53	0.40	0.44		0.31	1.78
Chelicera ..	Basal	0.44	Second	0.53				0.97

Type. Holotype male, Gore Bay, North Canterbury, October 30, 1948, R. R. Forster (C.M.A. 942).

Remarks. Unfortunately only a single specimen is known of this sub-species. It appears to be most closely related to *h.pelorus*, from which it may be separated by the presence of conical tubercles on the free tergites and the lesser degree of fusion in the ridges of the dorsal pattern.

Pristobunus barnardi n.sp.

Figs. 621–624

Male.

Colour. Entire animal bright reddish-brown, with black reticulate markings on dorsal surfaces of chelicerae and pedipalps and a few black markings on the scute.

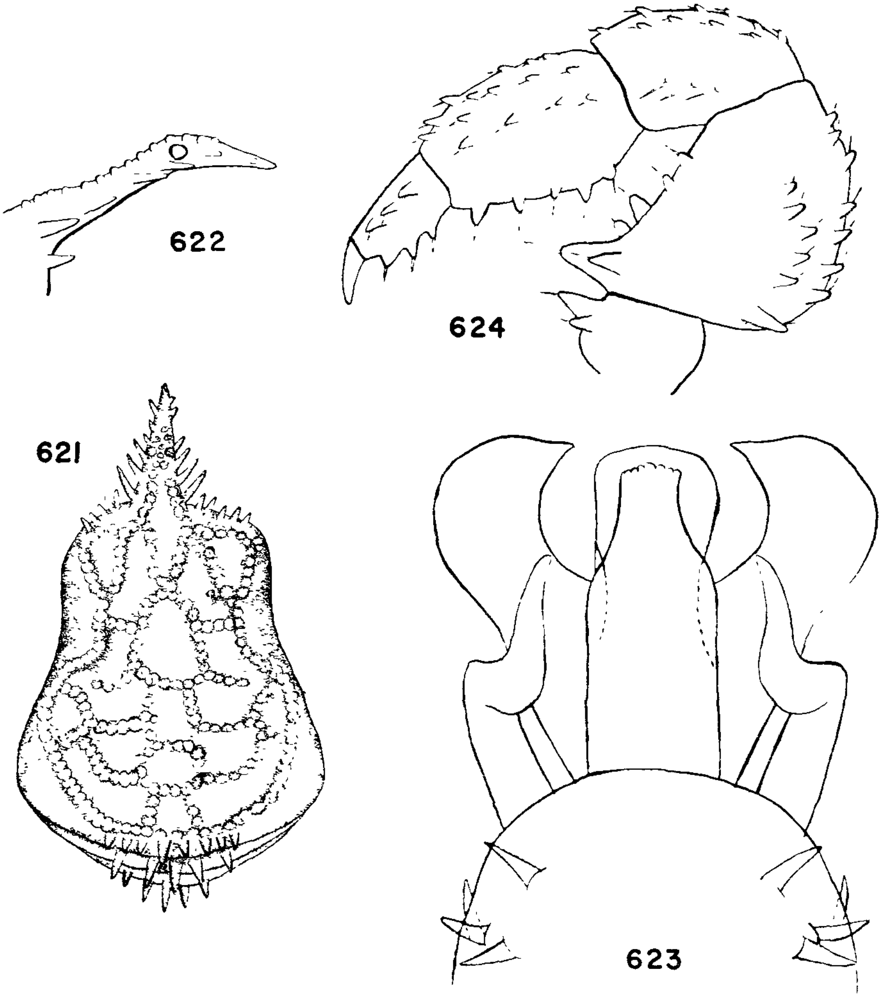
Body. The eyemound is strongly developed, bent down in the region of the eyes (Fig. 622). Length equal to one-third of the scute, with four prominent pairs of lateral branches posterior to the eyes. Anterior margin of the carapace armed with 5–6 digitiform tubercles each side of the eyemound. Dorsal pattern as in Fig. 621, pustules fused but separable. Posterior margin of the scute with 8–9 small conical tubercles grouped on the median surface. Free tergites 1–3 each with a similar group of more elongate tubercles. Genital operculum smooth.

Genitalia (Fig. 623). Anterior margin of ventral plate evenly rounded. Superior setae strongly developed, curved back near the mid-point.

Chelicerae. Both segments smooth.

Pedipalps (Fig. 624). Trochanter with two ventral tubercles, only one strong. Femur with two dorsal rows of denticulate tubercles, a strong conical tubercle on the proximo-ventral surface with a small accessory tubercle on the pro-lateral surface and four further smaller tubercles along the ventral surface. Dorsal surfaces of patella and tibia covered with small tubercles.

Legs. Femora of all legs armed with prominent tubercles. Patella and tibia less strongly armed. Tarsal formula 2.2.3.3.



FIGS. 621-624 *Pristobunus barnardi* n.sp.

Fig. 621 Dorsal surface of body; Fig. 622 Lateral view of eyemound; Fig. 623 Male genitalia; Fig. 624 Pro-lateral surface male pedipalp.

Measurements.

		Scute	Length	3.30	Width	2.60		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.75	0.31	0.97	0.48	0.71	0.88	0.48	4.58
Leg 2 ..	1.10	0.35	1.36	1.23	1.32	1.54	0.53	7.43
Leg 3 ..	1.01	0.44	0.88	0.44	0.88	1.10	0.48	5.23
Leg 4 ..	1.32	0.62	1.41	0.75	1.32	1.98	0.53	7.93
Pedipalp ..		0.22	0.75	0.41	0.53		0.35	2.26
Chelicera ..	Basal	0.40	Second	0.66				1.06

Type. Holotype male, Endeavour Inlet, Queen Charlotte Sounds, November 11, 1949. J. Barnard (C.M.A. 950).

Pristobunus synaptus n.sp.

Figs. 628–632

Male.

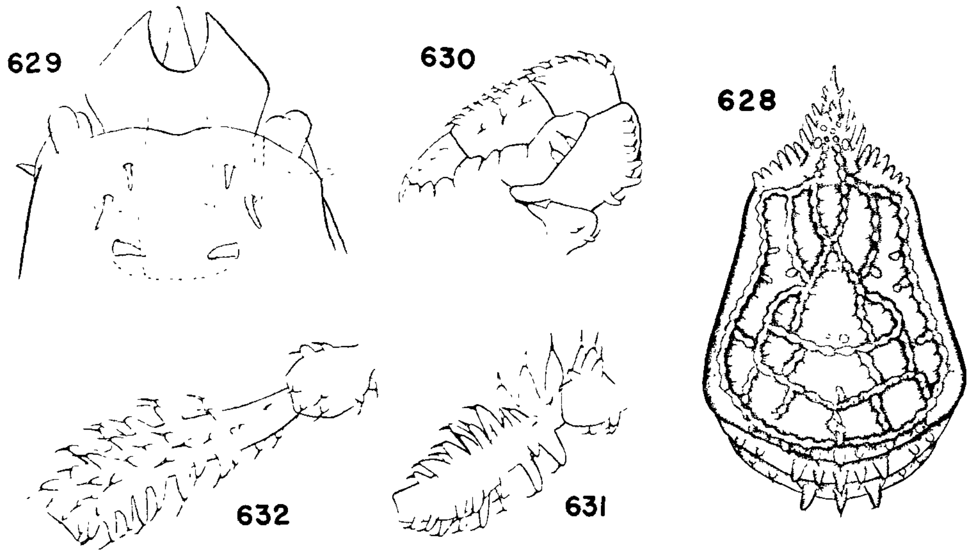
Colour. General colour pale-brown, with blackish markings on the lateral margins of the scute and the sternites.

Body. The dorsal pattern is as shown in Fig. 628. The ridges are relatively high, pustules fused, with small lateral seta. The length of the eyemound is equal to three times the width at the base and half the length of the scute. There are three pairs of slender lateral branches, one pair immediately behind the eyes and two immediately beyond. There are three to four small tubercles on the dorsal and dorsolateral surface beyond the lateral branches. Anterior margin of the carapace each side of the eyemound with from 6–7 digitate tubercles, smaller laterally. Posterior margin of the scute lined with small somewhat rounded tubercles. Free tergites 1 and 2 provided with five and three strong conical tubercles on the median surface respectively. Free tergite 3 and lateral margins of 1 and 2 with small tubercles. Sternites smooth. Genital operculum with small pustules grouped mainly about the anterior margin.

Genitalia. As shown in Fig. 629. The aedeagus is relatively slender, sub-pyriform. Ventral plate with a shallow antero-median depression. S1 small but stout, club shaped; S2 small.

Chelicerae. Minute tubercle on inner disto-dorsal surface of basal segment and proximo-dorsal surface of second segment.

Pedipalps. As shown in Fig. 630. Trochanter with strong ventral and two smaller dorsal tubercles. Femur with single pro-dorsal row of six tubercles, proximal three being larger; strong, posteriorly directed, digitate tubercle on proximo-ventral surface and two smaller mid-ventral tubercles. There are a number of small tuber-



FIGS. 628-632 *Pristobunus synaptus* n.sp.

Fig. 628 Dorsal surface body of male; Fig. 629 Male genitalia; Fig. 630 Pro-lateral surface male pedipalp; Fig. 631 Trochanter and femur leg 1 of male. Fig. 632 Trochanter and femur leg 4 of male.

cles on dorsal surfaces of patella and tibia. Tibia and tarsus with three small tubercles on both pro- and retro-ventral surfaces.

Legs. Coxa 1 with digitate tubercle on disto-ventral surface. Retro-lateral surface of coxa 2 and pro-lateral surface of coxa 4 with small digitate tubercles. Trochanter to tibia of all legs tuberculate, stronger on femora (Figs. 631, 632). Tarsal formula 2.2.2.3.

Measurements.

		Scute	Length	2.46	Width	2.02		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.53	0.26	0.92	0.53	0.66	0.66	0.31	3.87
Leg 2 ..	0.75	0.22	1.28	0.70	1.06	1.41	0.44	5.86
Leg 3 ..	0.62	0.26	0.70	0.48	0.66	0.88	0.31	3.91
Leg 4 ..	0.92	0.31	1.32	0.62	1.10	1.54	0.44	6.25
Pedipalps		0.20	0.53	0.31	0.40		0.31	1.75
Chelicera ..	Basal	0.40	Second	0.57				0.97

Female. Similar in appearance to male.

Measurements.

		Scute	Length	2.42	Width	2.07		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.48	0.26	0.88	0.48	0.53	0.62	0.31	3.56
Leg 2 ..	0.70	0.31	1.32	0.70	1.10	1.28	0.44	5.85
Leg 3 ..	0.66	0.31	0.66	0.44	0.75	0.88	0.31	4.01
Leg 4 ..	0.92	0.40	1.10	0.66	1.14	1.45	0.40	6.07
Pedipalp ..		0.20	0.53	0.31	0.40		0.26	1.70
Chelicera ..	Basal	0.35	Second	0.57				0.92

Types. Holotype male, Mount Grey, Canterbury, March 27, 1941, R. R. Forster (C.M.A. 135); Allotype female, same data, (C.M.A. 136); Paratype female, Ashley Gorge, Canterbury, October 10, 1949, R. R. Forster (C.M.A. 137).

Remarks. This sub-species seems to be closest to *ileticus* from which it can be distinguished by the greater development of the lateral branches of the eyemound. The unusual form of S1 of the male genitalia is not known in any other species of this genus.

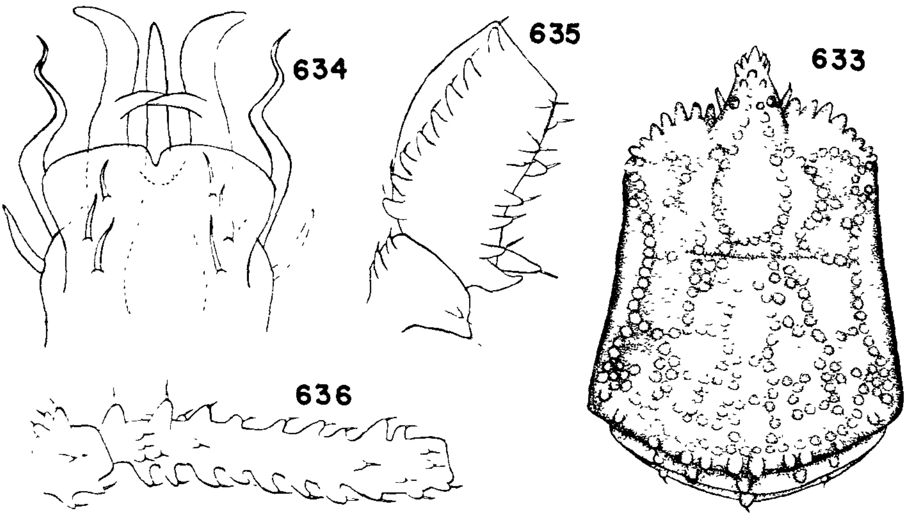
Pristobunus hadrus n.sp.

Figs. 633–636

Male.

Colour. The single specimen available has been dried and is a uniform dark blackish-brown.

Body. Dorsal pattern as shown in Fig. 633. The pustules are low and are not fused. The scutal groove is distinct. Seven to eight tubercles are present on the anterior margin of the carapace each side of the eyemound, inner tubercles conical, outer rounded. Eyemound rather short and broad, length less than twice the width at the base, and less than one-third of the length of the scute. There is a single pair of slender lateral branches behind the eyes and two short sub-apical pairs. The median two rows of pustules extend up from the carapace as far as the eyes. There are a few small pustules on the dorsal surface beyond the eyes. The median surface of the posterior margin of the scute with three pairs of rounded tubercles flanked on each side by two single tubercles. Free tergites each with a row of similar, but singly spaced tubercles. Sternites and genital operculum smooth.



FIGS. 633-636 *Pristobunus hadrus* n.sp.
Fig. 633 Dorsal surface of body; Fig. 634 Male genitalia; Fig. 635 Pro-lateral view trochanter and femur male pedipalp; Fig. 636 Trochanter and femur leg 1 of male.

Genitalia. Aedeagus distended near the base but slender apically (Fig. 634), and bounded laterally by strong spinous process with a secondary lateral spine. S 1 is strong and sinuous, almost three times the length of S 2. The ventral plate has a narrow notch in the median anterior margin.

Chelicerae. Small tubercle on the disto-dorsal surface of the basal segment and proximo-dorsal surface of the second segment.

Pedipalps (Fig. 635). Femur with a single pro-dorsal row of eight tubercles. There are two rows along ventral surface, a pro-ventral row of seven, of which the proximal is the strongest and curved apically, a retro-ventral row of three, proximal strong. The pro- and retro-ventral surfaces of the tibia are almost smooth. Five small teeth on retro-ventral surface of tarsus and three on pro-ventral.

Legs. Ventral surface of coxae strongly granulate. Group of three closely spaced elongate tubercles on distal retro-lateral surface of coxa IV, and smaller sub-distal tubercles. Pro-lateral surface of coxa IV with number of tubercles, distal being more elongate. Legs poorly armed. Femora with small tubercles arranged mainly dorso-ventrally, stronger on femur 1 (Fig. 636). Tarsal formula 2.2?.3?.3 (the tarsi of legs 2 and 3 are missing).

Measurements (Single damaged specimen)

		Scute	Length	2.77	Width	2.60		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.75	0.31	1.36	0.66	0.92	1.32	0.48	5.80
Leg 2 ..	1.10	0.35	2.16	0.84	?	?	?	?
Leg 3 ..	0.79	0.31	1.36	0.53	1.32	1.89	?	?
Leg 4 ..	1.32	0.44	2.20	0.66	1.98	2.82	0.79	10.21
Pedipalp ..		0.26	1.06	0.57	0.88		0.48	3.25
Chelicera ..		Basal	0.70	Second	1.10			1.80

Type. Holotype male, Hector Track, Tararua Ranges, May 20, 1921, R. E. R. Grimmett (D.M.2/239).

Remarks. The squat eyemound with poorly developed lateral branches separates this species from all other species known in the genus, as does the unusual structure of the penis.

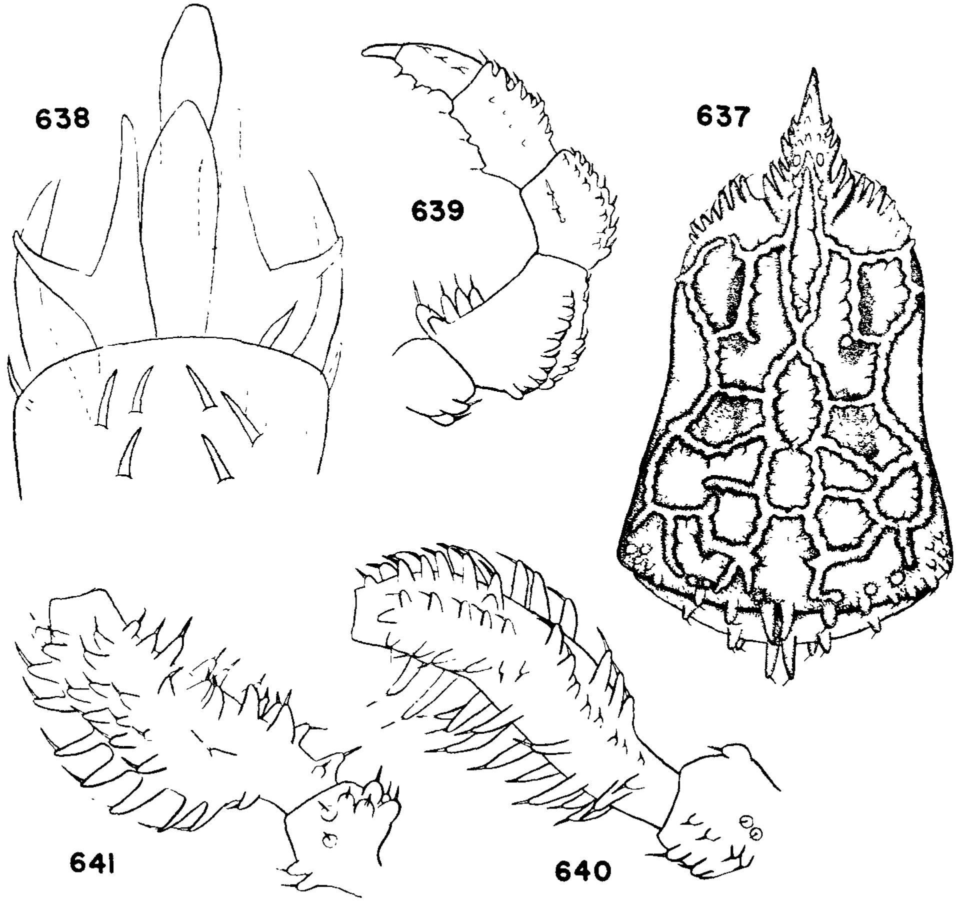
Pristobunus laminus n.sp.

Figs. 637-641

Male

Colour. General colour orange-brown with black markings on the lateral margins of the scute.

Body. Scute flattened. The dorsal pattern is as shown in Fig. 637. The pustules forming the ridges are completely fused, the position of each pustule indicated by a short black, laterally situated seta. The length of the eyemound is twice the width at the base and two-fifths of the length of the scute. The anterior margin of the carapace on each side of the eyemound is provided with 6-8 digitate tubercles. The eyemound is usually provided with five pairs of lateral branches, two strong pairs



FIGS. 637-641 *Pristobunus laminus* n.sp.
Fig. 637 Dorsal surface of body; Fig. 638 Male genitalia; Fig. 639 Pro-lateral surface male pedipalp; Fig. 640 Trochanter and femur leg 4 of male; Fig. 641 Trochanter and femur leg 1 of male.

behind the eyes and three small pairs immediately beyond the eyes. The specimen figured possesses a third branch on the left side immediately behind the eye. The median two ridges of the dorsal pattern extend up the eyemound to merge and terminate between the eyes. Beyond the eyes there are a few small tubercles dorsally. There is a pair of elongate tubercles on the median surface of the posterior margin of the carapace and the first free tergite with a number of smaller similar tubercles extending laterally (Fig. 637). Sternites with a row of granules. Genital operculum with small pustules, grouped mainly about the anterior margin.

Genitalia (Fig. 638). Aedeagus club-shaped with a pyriform plate extending over the proximal half of the ventral surface and strong bifid lateral processes. S 1 is strong and evenly curved, extending half-way to tip of aedeagus.

Chelicerae. Small tubercle on inner disto-dorsal surface of basal segment; and on proximo-dorsal surface of second segment.

Pedipalps As in Fig. 639. There are two rows of tubercles along the dorsal surface and four strong tubercles on the ventral surface, limited to the proximal half of the segment; secondary tubercle present on the pro-lateral surface of the basal tubercle. Dorsal surfaces of patella and tibia with numerous small setose tubercles. Four small tubercles present on the pro-ventral surface of tibia; three on retro-ventral; and three on both ventral surfaces of tarsus.

Legs. Ventral surface of coxa I granulate, two conical tubercles on pro-distal surface. Retro-lateral surface of coxa II with small digitate tubercles and a strong sub-rectangular apical tubercle. Femora of all legs with numerous strong digitate tubercles, mainly grouped dorso-ventrally (Figs. 640, 641). Patellae and tibiae strongly tuberculate. Tarsal formula 2.2.3.3.

Measurements

		Scute	Length	3.34	Width	2.77		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.66	0.35	1.32	0.62	0.92	0.97	0.44	5.28
Leg 2 ..	0.92	0.57	1.89	0.92	1.58	1.76	0.57	8.21
Leg 3 ..	0.84	0.57	1.10	0.70	1.06	1.32	0.53	6.12
Leg 4 ..	1.36	0.48	1.76	0.79	1.76	2.11	0.66	8.92
Pedipalp ..		0.20	0.66	0.48	0.62		0.26	2.22
Chelicera ..	Basal	0.57	Second	0.92				1.49

Types. Holotype male, South Terrace, Karamea, January 20, 1950, R. R. Forster (C.M.A. 118); Paratypes, Karamea Bluff, January 20, 1950, R. R. Forster, 1 ♂ (C.M.A. 119), South Terrace, Karamea, January 20, 1950, R. R. Forster, 1 ♂ (D.M.2/219); Oparara, Karamea, January 24, 1950, R. R. Forster (C.M.A. 120).
Record. Pelorus Bridge, Marlborough, January 1949, A. C. O'Connor, 1 ♂ (C.M.A. 144).

Remarks. This species appears to be related to the *acuminatus* group, but is clearly separated from them by the uniformly fused nature of the dorsal ridges.

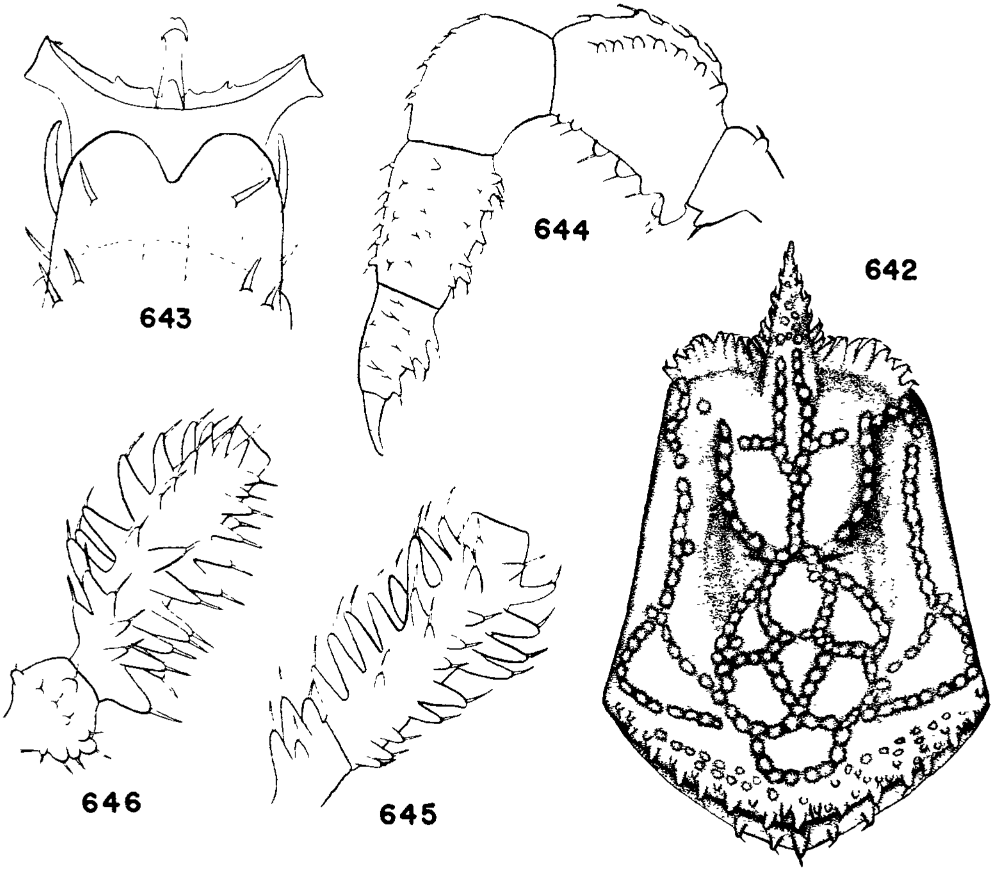
Pristobunus ignavus n.sp.

Figs. 642-646

Male

Colour. Dark reddish-brown with dark patches near the lateral margins of the scute.

Body. Dorsal pattern as shown in Fig. 642. The pustules are fused and the ridges have a rope-like appearance. The eyemound is directed forward directly from the anterior



Figs. 642-646 *Pristobunus ignavus* n.sp.

Fig. 642 Dorsal surface body of male; Fig. 643 Male genitalia; Fig. 644 Pro-lateral surface male pedipalp; Fig. 645 Trochanter and femur leg 1 of male; Fig. 646 Trochanter and femur leg 4 of male.

margin of the carapace and rises only slightly above the level of the scute. The length is equal to almost three times the diameter at the base and slightly more than one-third of the length of the scute. There are four to five pairs of lateral branches, diminishing in size distally, only the first pair situated posterior to the eyes. The anterior margin of the carapace at each side of the eyemound is provided with from 8-10 strong tubercles, which are fused at the base to form a ledge. Posterior margin of the scute and free tergites with small conical tubercles as shown in Fig. 642. Sternites with a transverse row of granules. Genital operculum with few small pustules.

Genitalia (Fig. 643). Similar to *heterus* but distal half of aedeagus slender.

Chelicerae. As in *heterus*.

Pedipalps (Fig. 644). Similar to *heterus*, differing mainly in that the pro-ventral tubercles of the femur are four in number, two proximal, two distal, first proximal obliquely clavate.

Legs. Ventral surface of coxa 1 with five sharply conical tubercles, three median, two distal in position. Retro-lateral surface of coxa 2 and pro-dorsal surface of coxa 4 with digitate tubercles. Trochanter to tibia of all legs armed with prominent tubercles, stronger on femora (Figs. 645, 646). Tarsal formula 2.2.3.3.

Measurements

		Scute	Length	3.70	Width	3.04		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.75	0.40	1.19	0.62	0.92	1.10	0.44	5.42
Leg 2 ..	1.01	0.48	1.85	1.01	1.54	1.76	0.48	8.13
Leg 3 ..	0.92	0.44	1.01	0.62	1.10	1.19	0.44	5.72
Leg 4 ..	1.58	0.62	1.67	0.79	1.58	2.20	0.57	9.01
Pedipalp ..		0.26	0.75	0.48	0.66		0.44	2.59
Chelicera ..	Basal	0.48	Second	0.70				1.18

Female. Unknown.

Types. Holotype male, Maori Bay, Stewart Island, November 25, 1946, R. R. Forster (D.M.2/224), Paratype, same data, one ♂ (C.M.A. 126).

Remarks. Distinguished from both *ceratias* and *heterus* by the more complete fusion of the pustules forming the dorsal pattern, the stronger tubercles on the legs and the fusion of the tubercles along the anterior margin of the carapace.

Pristobunus ceratias n.sp.

Figs. 647-650

Male

Colour. As in *ignavus* but with a blackish band extending down the median surface of the tergal area of the scute which narrows posteriorly.

Body. The dorsal pattern is shown in Fig. 647. The pustules forming the ridges are smaller than in *ignavus* and are partially fused. There are a pair of rounded tubercles near the posterior margin of the scute, between the two transverse ridges. The eye-mound is more slender than in *ignavus*, its length being equal to four times the width at the base and almost half the length of the scute. There are four pairs of lateral branches, the single pair behind the eyes being the stronger. There are eight tubercles present on each side of the anterior margin of the carapace, the inner four strong and conical, the outer four small. The median tubercles on the posterior margin of the scute are conical, lateral tubercle rounded (Fig. 647). The free tergites with small, rounded tubercles. Sternites smooth. Genital operculum with a few pustules on the anterior surface.

Genitalia (Fig. 648). Aedeagus stout, but distal half narrowing sharply. S 1 massive.

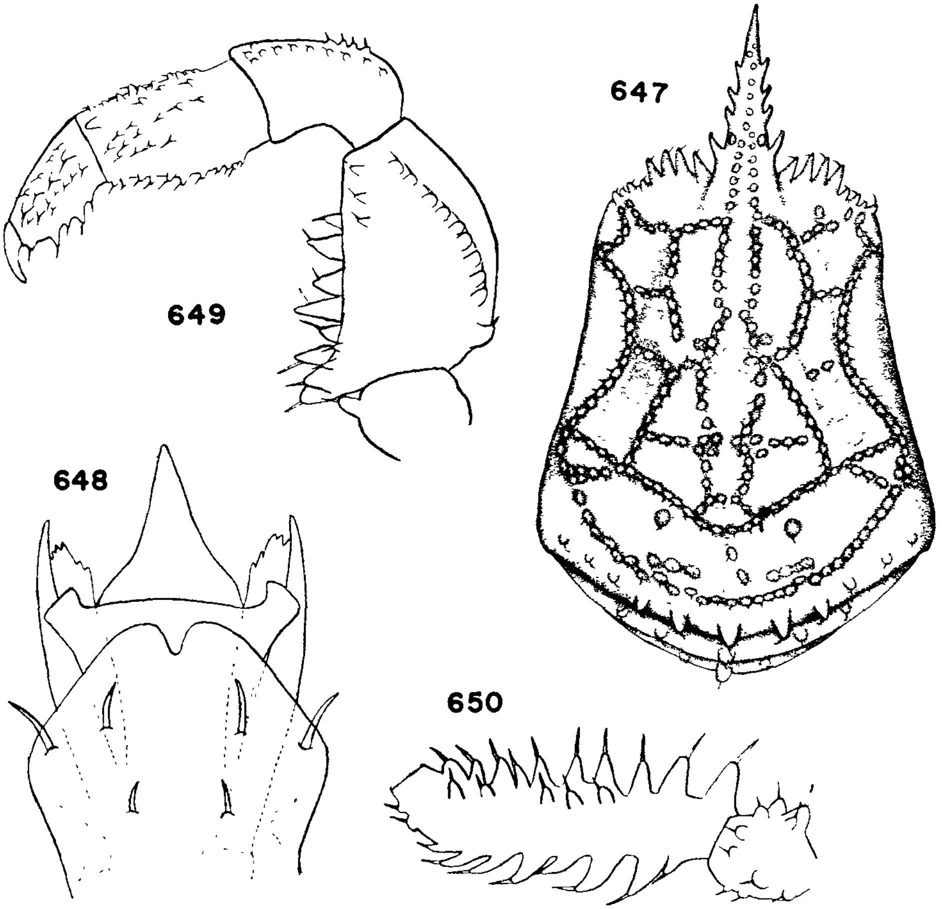
Chelicera. Normal.

Pedipalps (Fig. 649). Trochanter with a single venrral tubercle. Only a single pro-dorsal row of tubercles present on the dorsal surface of the femur; ventral surface with a strong bifid tubercle on proximal surface followed by six strong tubercles along the retro-ventral surface, and five small tubercles on the pro-ventral surface, two proximal, three distal. Patella, tibia and tarsus similar in structure to *ignavus.*

Legs. Coxae as in *ignavus.* Femur 1 with rows of strong tubercles on both dorsal and ventral surface (Fig. 650), legs otherwise smooth or with small, low, rounded tubercles. Tarsal formula 2.2.3.3.

Measurements

Scute Length 3.65 Width 3.08



FIGS. 647-650 *Pristobunus ceratias* n.sp.

Fig. 647 Dorsal surface body of male; Fig. 648 Male genitalia; Fig. 649 Pro-lateral surface male pedipalp; Fig. 650 Trochanter and femur leg 1 of male.

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.70	0.40	1.41	0.66	1.01	1.36	0.53	6.07
Leg 2 ..	1.10	0.53	2.24	0.97	1.98	2.33	0.88	10.03
Leg 3 ..	0.92	0.35	1.32	0.66	0.32	1.67	0.62	5.86
Leg 4 ..	1.10	0.62	2.20	0.88	1.80	2.20	0.88	9.68
Pedipalp ..		0.40	1.28	0.70	0.70		0.48	3.56
Chelicera ..		Basal	0.62	Second	0.97			1.59

Female. Similar in structure to male.

Measurements		Scute	Length	3.61	Width	2.86		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.62	0.31	1.01	0.66	0.84	1.14	0.48	5.06
Leg 2 ..	1.10	0.40	2.02	0.88	1.76	2.02	0.75	8.93
Leg 3 ..	0.92	0.26	1.14	0.66	1.19	1.36	0.53	6.06
Leg 4 ..	1.32	0.48	1.98	0.89	1.76	2.60	0.57	9.60
Pedipalps ..		0.14	0.62	0.44	0.48		0.44	2.12
Chelicerae		Basal	0.35	Second	0.62			0.97

Types. Holotype male, Orepuki, Southland, May 9, 1949, R. R. Forster, J. H. Sorensen (C.M.A. 121), Allotype female, same data (C.M.A. 124); Paratypes: same data as holotype, 4 ♂ (C.M.A. 122, 693, D.M.2/220).

Records. Halfmoon Bay, Stewart Island, March 19, 1949, O. Allan, one ♂, one immature (C.M.A. 123); Halfmoon Bay, Stewart Island, November 22, 1946, R. R. Forster, one ♂, one ♀, one immature (D.M.2/221).

Pristobunus heterus n.sp.

Figs. 651-654

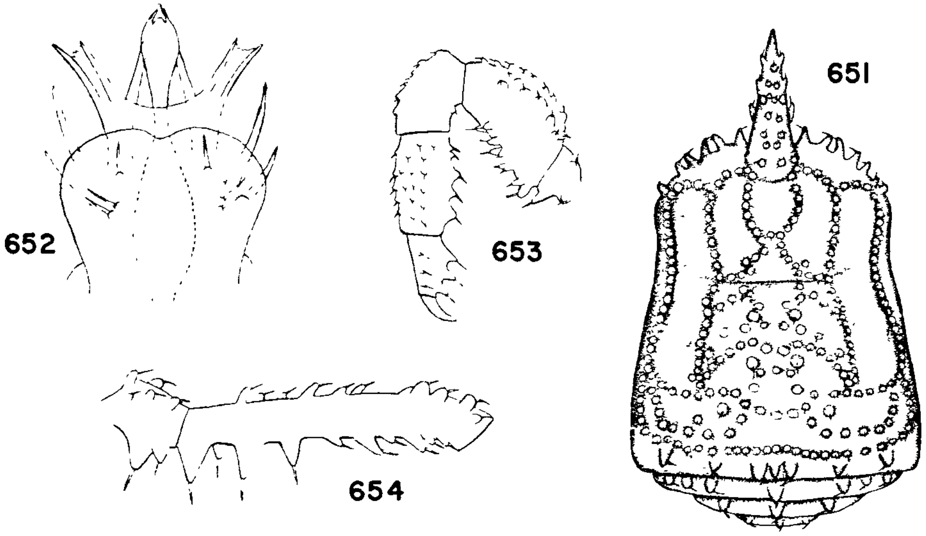
Male

Colour. Ground colour pale-yellow, with a dark patch on the lateral margin of the scute. All pustules and tubercles are conspicuous owing to a white sub-cutaneous pigment which shows through the pale cuticle. There are alternate white and black patches on the sternites.

Body. The dorsal pattern is shown in Fig. 651. Pustules not fused. The scutal groove is narrow and limited to the median surface. Anterior margin of the carapace provided with from 6-7 relatively small tubercles along each side of the eyemound. The length of the eyemound is equal to two and a half times the width at the base and slightly more than one third of the length of the scute. Three or four small lateral branches present, one behind the eyes, two or three anterior. Posterior margin of the scute and free tergites with somewhat conical tubercles as shown in Fig. 651. Genital operculum smooth.

Genitalia (Fig. 652). Aedeagus constricted medially, with a small bifid apical process which is curved down. The anterior margin of the ventral plate with a shallow median indentation. S 1 not strongly developed but more than twice as long as S 2.

Chelicerae. Basal segment with a small spinous tubercle on inner disto-dorsal surface; second segment with two similar tubercles on the proximo-dorsal surface.



FIGS. 651-654 *Pristobunus heterus* n.sp.

Fig. 651 Dorsal surface body of male; Fig. 652 Male genitalia; Fig. 653 Pro-lateral surface male pedipalp; Fig. 654 Trochanter and femur leg 1 of male.

Pedipalps (Fig. 653). Trochanter with a conical tubercle on the ventral surface and a small rounded tubercle on both dorsal and ventral surfaces. Dorsal surface of femur with two rows of low rounded tubercles. Ventral surface with two rows of larger, more conical tubercles, of which the common proximal tubercle is the larger. Small tubercles present on dorsal surface of patella. Tibia with five retro-ventral tubercles. The pro-ventral tubercles merge with the tubercles on dorsal and lateral surfaces. Tarsus with three tubercles on both pro- and retro-lateral surfaces.

Legs. Three strong, sharply conical tubercles present on disto-ventral surface of coxa 1. Retro-lateral surface of coxa 2 and pro-ventral surface of coxa 4 with a few digitate tubercles. Trochanter and femur of leg 1 with relatively strong conical tubercles (Fig. 654), on the ventral surface. Patella of leg 1 and trochanter, femur and patella of legs 2-4 armed with small tubercles. Tibia 4 sinuous. Tarsal formula 2.2.3.3.

Measurements

		Scute	Length	2.77	Width	2.38		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.70	0.35	1.54	0.62	1.06	1.10	0.48	5.85
Leg 2 ..	0.92	0.40	2.24	0.79	1.80	2.24	0.84	9.23
Leg 3 ..	0.75	0.31	1.32	0.66	1.32	1.63	0.62	6.61
Leg 4 ..	1.19	0.48	2.20	0.84	1.85	2.68	0.70	9.94
Pedipalp ..		0.26	0.92	0.66	0.79		0.48	3.11
Chelicera ..		Basal	0.75	Second	0.97			1.72

Female. Similar in structure to male.

Measurements

		Scute	Length	2.86	Width	2.46		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.57	0.26	1.19	0.48	0.66	0.79	0.40	4.35
Leg 2 ..	0.88	0.31	1.80	0.70	1.54	1.76	0.88	7.87
Leg 3 ..	0.62	0.31	1.14	0.66	1.19	1.54	0.48	5.94
Leg 4 ..	1.19	0.53	1.94	0.79	1.58	2.24	0.66	8.93
Pedipalp ..		0.26	0.88	0.57	0.66		0.31	2.68
Chelicera ..		Basal	0.57	Second	0.92			1.49

Types. Holotype male, Horseshoe Bay, Stewart Island, November 21, R. R. Forster (D.M.2/223); Allotype female, Raroa Reserve, Stewart Island, October 30, 1948, R. K. Dell (D.M.2/222); Paratypes: Maori Bay, Stewart Island, November 25, 1946, R. R. Forster, one ♀ (C.M.A. 125); Raroa Reserve, Stewart Island, October 30, 1948, R. K. Dell, one ♀ (C.M.A. 124); Stewart Island, November 20, 1948, O. Allan, one ♀ (C.M.A. 588).

Remarks. This species may be immediately recognised by the striking white coloration of the pustules and tubercles.

Genus *MUSCICOLA* n.gen.

Eyemound elongate, conical, projecting forward from the anterior margin of the carapace, without lateral branches. Anterior margin of the carapace armed with strong tubercles. Scute with small pustules arranged in a closed pattern. Tergal areas not defined. Areas 1-4 with a median pair of conical tubercles. Posterior margin of scute and free tergites each with a row of strong tubercles. Genital operculum smooth. Calcaneus shorter than astragalus. Tarsal formula 3.5.4.4. Side branches of claws 3 and 4 much shorter and weaker than median prong.

Genotype *Muscicola picta* n.sp.

This genus is related to *Pristobunus* from which it is separated by the lack of side branches on the eyemound and the presence of three tarsal segments to leg 1. I have not included the coloration of the one species known as a generic character although if further species of this genus, which may still be found, are arboreal in habit the green coloration would probably be a striking and valid character.

Muscicola picta n.sp.

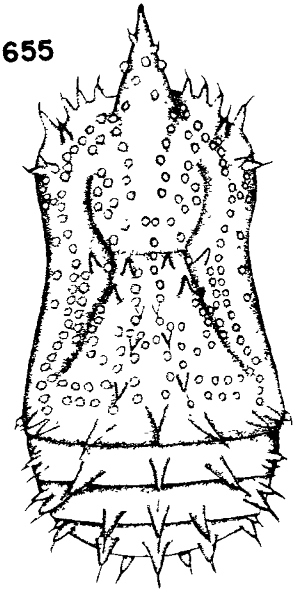
Figs. 655-658

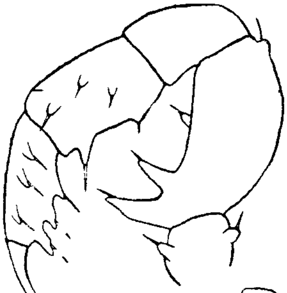
Male

Colour. The general colour is a pale pastel green, with the chelicerae and pedipalps a dark leaf-green. The lateral margins of the scute, the eyemound and the dorsal surfaces of coxae 2-4 are a rich orange-brown. Dorsal surface of trochanter 4 and the proximo-dorsal surface of the femur is light chocolate-brown.

Body. The eyemound is sub-conical, sharp apically, directed obliquely forward from the anterior margin of the carapace, its length equal to twice the width at the base and one-third of the total length of the scute, with a number of small setose pustules on the dorsal surface and a single pustule on the mid-ventral surface (Fig. 655). The anterior margin of the carapace is provided with four conical tubercles each side of the eyemound, with a further similar tubercle set back from the anterior margin between the lateral pair and two further tubercles on the lateral margin of the carapace at about one-quarter of the length of the scute. Both carapace and tergal area of the scute with a pattern of small pustules as shown in Fig. 655. There is a deep depression extending down the mid-lateral surface of the scute, curving in to

655





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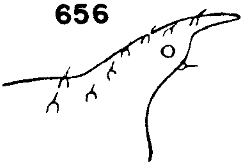

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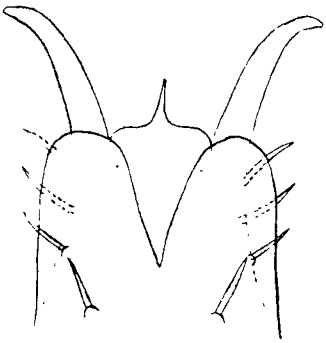


Figs. 655-658 *Muscicola picta* n.sp.

Fig. 655 Dorsal surface body of male; Fig. 656 Lateral view eyemound; Fig. 657 Male genitalia; Fig. 658 Pro-lateral surface male pedipalp.

the scutal groove. Scutal groove shallow, visible only between the lateral depressions. Transverse grooves not present on tergal region. Areas 1-4 with a pair of conical tubercles on the median surface. Posterior margin of the scute and the free tergites each with a transverse row of much stronger conical tubercles as shown in Fig. 655. Sternites with few small pustules. Genital operculum smooth.

Genitalia. The aedeagus is somewhat turnip-shaped, as shown in Fig. 657 with two strong lateral processes which extend well beyond the aedeagus itself. Ventral plate with a median incision, one superior and three inferior setae, sub-equal in size.

Chelicerae. Smooth, apart from a few small tubercles on the dorsal surface of the second segment.

Pedipalps (Fig. 658). Trochanter with a small tubercle on both dorsal and ventral surfaces. Dorsal surface of femur smooth apart from a low rounded tubercle on the distal surface; strong spinous tubercle on the proximo-ventral surface, followed closely by a similar but slightly smaller tubercle and with a further smaller, more rounded tubercle on the mid-ventral surface.

Legs. Coxa 1 with a bifid tubercle on the disto-ventral surface. All segments of the legs except the tarsus with setose tubercles, more prominent on femora, patellae and tibiae. Tarsal formula 3.5.4.4.

Measurements

		Scute	Length	3.08	Width	2.16		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	0.75	0.26	1.63	0.62	1.10	1.23	0.66	6.25
Leg 2	1.32	0.44	3.52	0.88	3.04	3.70	1.10	14.00
Leg 3	1.10	0.48	2.60	0.70	2.20	3.08	0.75	10.91
Leg 4	1.80	0.53	3.30	0.92	2.82	4.58	0.93	14.88
Pedipalp		0.20	0.84	0.40	0.53		0.44	2.41
Chelicera		Basal	0.53	Second	0.97			1.50

Types. Holotype male, Stillwater Base, Caswell Sound, April 11, 1949, R. R. Forster (C.M.A. 843); Paratypes: same locality, March 13, 1949, R. K. Dell, 1 male (D.M.2/849), Lake Te Au, beyond South Fiord, Lake Te Anau, January 20, 1953, R. R. Forster, 1 ♂ (C.M.A. 1057).

Sub-family SOERENSENELLINAE n.sub.fam.

Triaenonychids with tarsal claws of legs 3 and 4 with strong lateral processes, equal in length to, or longer than the median prong. Eggs laid in a single group under a log or stone and guarded by the female until hatched.

In this sub-family are included the two New Zealand genera *Soerensenella* and *Karamea* and also two South African genera *Roeweria* Lawrence, 1931 and *Speleomontia* Lawrence, 1931.

Key to the New Zealand Genera

Eyemound with an erect apical spine.................... *Soerensenella* Pocock 1903

Eyemound with the apical spine directed forward and usually strongly developed .... *Karamea* n.gen.

Genus *SOERENSENELLA* Pocock, 1903

1903 *Soerensenella* Pocock, Proc. Zool. Soc. London, p.409
1903 *Soerensenella* Pocock Ann. Mag. Nat. Hist. Ser. 7, 118, p.439

1914 *Soerensenella* Roewer, Arch. Naturg. 80 (12), p.93
1920 *Soerensenella* Hogg, Proc. Zool. Soc. London. p.42
1932 *Soerensenella* Phillipps and Grimmett, Proc. Zool. Soc. London, p.737
1931 *Akaroa* Roewer, Zeits.f.zool. 138 (1), p.169

Eyemound placed near the middle of the carapace, armed with a short apical spinous tubercle. One or two spinous tubercles on each anterior corner of the carapace. Areas 2-4 each with a median pair of tubercles. Posterior margin of the scute and free tergites without strong tubercles. Legs unarmed. Calcaneus much shorter than astragalus. Tarsal formula 3-4, 9-12, 4,4. Side branches of claws 3 and 4 longer and stronger than the median prong. Sexual dimorphism prominent. The pedipalps of the male much stronger than female; some species with tarsus 1 of male 4-segmented, female 3-segmented.

Genotype (monotypy) *Soerensenella prehensor* Pocock, 1903

Roewer (1931) established *Akaroa* for his species *formosa* from Akaroa. This genus was based on the four-segmented nature of the first tarsus of the two specimens which he had available. Both of these specimens were males. There is no doubt that this species is synonymous with *Soerensenella bicornis* in which the number of tarsal segments to leg 1 are 3 in the female and 4 in the male and therefore *Akaroa* is placed in synonymy as above.

Soerensenella prehensor Pocock, 1903

1903 *Soerensenella prehensor* Pocock, Proc. Zool. Soc. London, p.409
1914 *Soerensenella prehensor* Pocock, Roewer, Arch. Naturg. 80A (12), p.93
1923 *Soerensenella prehensor* Pocock, Roewer. Die Weberknechte der Erde. p.600

Figs. 659-663

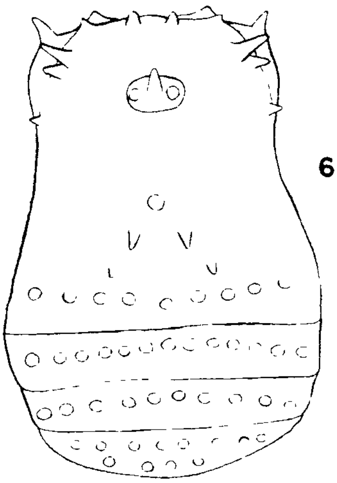
Male

Colour. General colour reddish-brown, with a black pattern on the scute as shown in Fig. 659. The free tergites are blackish with a transverse row of pale brown spots. The dorsal surfaces of chelicerae and pedipalps with black reticulate markings.

Body. The eyemound is oval in shape, wider than it is deep, separated from the anterior margin of the carapace by a distance equal to four-fifths of its width and provided with an erect median spinous process which is equal in height to the eyemound proper (Fig. 663). There is a ridge present along the anterior margin of the carapace which extends back down the lateral margins of the scute. There are two small rounded tubercles on the antero-median surface of the carapace and a smaller mid-lateral tubercle; the anterior corners are provided with a strong spinous tubercle behind which is a further pair of similar tubercles of which the more posterior is the smaller and a small tubercle on the lateral margin at about half-way (Fig. 659). The scutal groove is distinct. Tergal areas not separated by transverse grooves. Area 1 with a low, rounded median tubercle, Areas 3 and 4 with a median pair of spinous tubercles, more widely spaced on Area 4. Posterior margin of the scute and free tergites each with a transverse row of low tubercles. Sternites and genital operculum smooth.

Genitalia. As shown in Fig. 662, the aedeagus is slender, enclosed by a sheath which has a key-hole, shaped opening on the disto-ventral surface. The ventral plates are fused, with the anterior margin slightly pro-curved; two superior, three inferior setae present, sub-equal in size.

Chelicerae. Basal segment with a small spinous tubercle on the inner disto-dorsal



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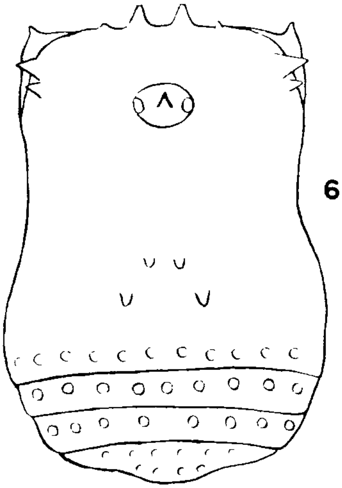

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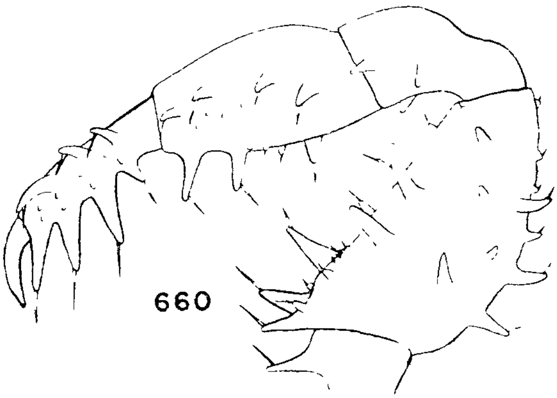

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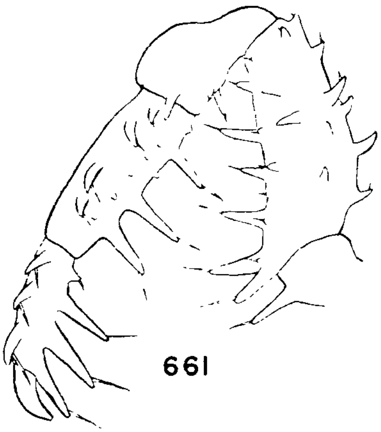

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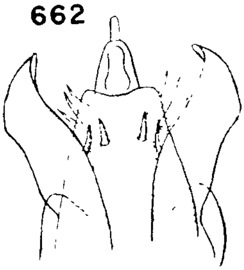

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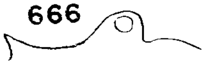

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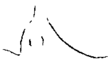

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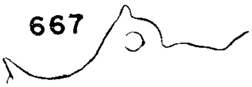

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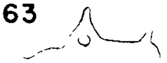


FIGS. 659-663 *Soerensenella prehensor* Pocock

Fig. 659 Dorsal surface body of male; Fig. 660 Pro-lateral surface male pedipalp; Fig. 661 Pro-lateral surface female pedipalp; Fig. 662 Male genitalia; Fig. 663 Lateral view of eyemound of male.

FIGS. 664-665 *Soerensenella prehensor obesa* n.s.sp.

Fig. 664 Lateral view eyemound of male; Fig. 665 Dorsal surface body of male.

FIGS. 666-667 *Soerensenella prehensor nitida* n.s.sp.

Fig. 666 Lateral view eyemound of female; Fig. 667 Lateral view eyemound of male.

surface and a row of from 3-4 small tubercles on the dorsal surface of the second segment.

Pedipalps (Fig. 660). Stout. Trochanter with a strong spinous tubercle on the ventral surface. Femur with a row of six tubercles along the dorsal surface, of which the first three are strong and spinous, the distal three small and rounded, and a further spinous tubercle on the mid pro-dorsal surface. There are seven strong spinous tubercles on the ventral surface arranged 2.1.2.2. The first two are proximal while the final two pairs are median. There are three smaller spinous tubercles on the pro-lateral surface as shown in Fig. 660. Patella with three spinous tubercles, two mid-ventral, one pro-, one retro-ventral in position and the third on the distal pro-lateral surface. Tibia and tarsus with numerous small tubercles on the ventral surface. Pro-ventral margin of tibia with four, retro-ventral margin of tibia and both ventral margins of tarsus with three spinous tubercles.

Legs. There are three spinous tubercles on the pro-lateral ventral surface of coxal, distal strongest and bifid. Legs smooth. Tarsal formula 3.9-11.4.4.

Measurements

		Scute	Length	3.17	Width	3.52		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.32	0.48	1.80	0.92	1.67	2.11	0.88	9.18
Leg 2 ..	1.85	0.62	3.34	1.01	2.86	3.56	2.11	15.35
Leg 3 ..	1.54	0.53	2.42	0.92	1.76	2.68	1.14	10.99
Leg 4 ..	1.89	0.66	3.30	1.10	2.42	4.39	1.41	15.17
Pedipalp ..		0.66	3.08	1.36	2.11		1.80	9.01
Chelicera ..		Basal	0.70	Second	1.67			2.37

Female. Differing from the male as follows:—The two tubercles behind the anterior corners of the eyemound are smaller and more equal in size. The apical spine of the eyemound is relatively smaller being equal to four-fifths of the height of the eyemound proper. The pedipalps are more slender (Fig. 661) tubercles similar in disposition but generally more slender and longer; the two strong spinous tubercles on the median pro-ventral surface of the femur are represented by a pair of small dentiform tubercles. There are only a few tubercles on the ventral surfaces of tibia and tarsus. Tarsal formula 3.10-11.4.4.

Measurements

		Scute	Length	3.39	Width	3.69		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.10	0.44	1.76	0.88	1.54	2.20	0.97	8.89
Leg 2 ..	1.85	0.53	2.86	0.97	2.42	3.30	1.32	13.25
Leg 3 ..	1.41	0.48	1.98	0.88	1.85	2.55	1.01	10.16
Leg 4 ..	1.67	0.62	3.08	0.92	2.20	3 96	1.14	13.59
Pedipalp ..		0.44	2.42	1.28	1.58		1.54	7.26
Chelicera ..		Basal	0.70	Second	1.63			2.33

Types. Holotype female?, New Zealand, coll. Dr. Richardson, British Museum, Natural History, London.

Records. Titirangi, Auckland, December 2, 1950, T. E. Woodward, 2 ♂, 4 ♀ (C.M.A. 224); same locality, December 2, 1945, R. R. Forster, 2 ♂, 5 ♀ (D.M.2/293); Manurewa, Auckland, May 28, 1943, R. R. Forster, 2 ♀ (D.M.2/295); Waitakere Hills, Auckland, 1947, P. M. King, 1 ♀ (C.M.A. 411); same locality, May 25, 1951, B. J. Marples, 1 ♂, 2 ♀ (C.M.A. 713); same locality, September 19, 1950, T. E. Woodward, 1 ♂, 1 ♀ (C.M.A. 714); same locality, June 14, 1943, R. R. Forster, 1 ♂ (D.M.2/294); Auckland Domain, December 29, 1941, D. Spiller, 2 ♀ (D.M.2/297);

Clevedon, Auckland, February 17, 1952, F. Milner, 10 ♀ (C.M.A. 717); Auckland, September 21, 1950, T. E. Woodward, 1 ♀,2 imm. (C.M.A. 716): Kawaka, December 1948, 2 ♂, 3 ♀ (C.M.A. 409); Waipoua, November 30, 1949, N. M. Wilson, 1 ♂, 5 ♀ (C.M.A. 712); Mair Park, Whangarei, January 18, 1929, E. Fairburn, 2 ♀ (C.M.A. 721); Tararoa, Whangarei, January 12, 1929, E. Fairburn, 2 ♀ (D.M.2/296); Whangarei, December 1948, R. A. Cumber, 3 ♂, 5 ♀ (C.M.A. 722); Matarara, Kaikohe, March 14, 1929, E. Fairburn, 1 ♂ (D.M.2/299); Kohuranaki, January 21, 1950, A. C. O'Connor, 3 ♂, 3 ♀ (C.M.A. 718); Church Road, Pekerau, January 24, 1950, A. C. O'Connor, 2 ♂ (C.M.A. 720); Oruru Bay, January 29, 1950, A. C. O'Connor, 1 ♂, 3 ♀ (C.M.A. 719); 5 miles south of North Cape, January 29, 1950, A. C. O'Connor, 5 ♂, 7 ♀ (C.M.A. 711); Little Barrier Island, December 9-11, 1950, T. E. Woodward, 2 ♀ (C.M.A. 710); Hen Is., October 25, 1925, H. Hamilton, 1 ♂ (C.M.A. 412).

Remarks. Dr. Evans of the British Museum kindly examined Pocock's type material and has informed me that there is only a single specimen of this species in the British Museum collection. This fact was implied by Pocock in his description but not stated definitely. The specimen is apparently a female. Roewer (1923), in preparing the descriptions and figures for *prehensor* and *bicornis* was not able to examine the type material but identified material in his own collection from Christchurch under both of these species. However, it is evident from his figures that Roewer's collection included only *bicornis*. The "male" figured under *prehensor* (Fig. 750) is a female of *bicornis* while the figure for *bicornis* (Fig. 751) is correct for the male of this species.

Soerensenella prehensor obesa n.s.sp.

Figs. 664-665

This form is larger than *prehensor*. The two tubercles on the antero-median surface of the carapace are relatively larger and the tubercle on each anterior corner is shorter than in *prehensor* (Fig. 664), and the small tubercle present on the lateral margins of the carapace of *prehensor* is absent. The apical spine on eyemound is directed back slightly (Fig. 665). Pedipalp, chelicerae and genitalia as in *prehensor*.

Measurements

		Scute	Length	4.18	Width	4.31		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.32	0.62	2.11	0.97	1.63	2.42	0.92	9.99
Leg 2 ..	2.02	0.66	3.34	1.10	2.64	3.61	1 76	15.13
Leg 3 ..	1.80	0.57	2.59	1.10	1.76	2.64	1.06	11.52
Leg 4 ..	1.98	0.57	3.08	1.10	2.64	4.22	1.23	14.82
Pedipalp ..		0.62	3.08	1.80	2.51		2.20	10.21
Chelicera ..		Basal	0.97	Second	1.76			2.73

Female

Measurements

		Scute	Length	3.52	Width	3.96		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.10	0.35	2.07	0.75	1.41	1.98	0.75	8.41
Leg 2 ..	1.76	0.53	2.86	1.01	2.42	3.30	2.11	13.99
Leg 3 ..	1.45	0.57	2.20	0.88	1.72	2.64	0.88	10.34
Leg 4 ..	1.76	0.57	2.86	1.10	2.20	3.83	0.97	13.29
Pedipalp ..		0.51	2.16	1.21	1.64		1.56	7.08
Chelicera ..		Basal	0.82	Second	1.44			2 26

Types. Holotype male, Reinga, North Cape, January, 1948, A. C. O'Connor (C.M.A. 225); Allotype female, same data (C.M.A. 226); Paratypes, same data (D.M.2/302).

Remarks. This sub-species, which is separated from *prehensor* mainly by its larger size is restricted to the most northern portion of the North Cape District. It appears to be a very small colony which is effectively isolated from the typical form, although this is to be found only a few miles distant.

Soerensenella prehensor nitida n.s.sp.

Figs. 666-667

Male. Separated from *prehensor* by possessing only a small tubercle on the apical surface of the eyemound as shown in Fig. 667; the two tubercles behind each anterior corner of the carapace are sub-equal, inner tubercle strong.

Measurements

		Scute	Length	3.61	Width	3.70		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	1.36	0.53	2.42	0.92	1.76	2.42	0.92	10.33
Leg 2 ..	2.20	0.70	3.74	1.23	3.34	4.79	2.38	18.38
Leg 3	1.76	0.66	2.77	1.01	2.07	3.34	1.19	12.80
Leg 4	2.20	0.75	3.70	1.19	2.64	4.79	1.67	16.94
Pedipalp		0.57	3.70	1.98	2.64		2.20	11.49
Chelicera ..		Basal	0.92	Second	1.76			2.68

Female. Similar in structure to male. The pedipalps are more slender, as in *prehensor*. The eyemound is smooth as shown in Fig. 666.

Measurements

		Scute	Length	3.17	Width	3.56		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.14	0.48	1.76	0.84	1.36	1.98	0.84	8.40
Leg 2 .	1.76	0.57	2.51	0.97	2.64	3.30	2.20	13.95
Leg 3	1.36	0.48	2.20	0.84	1.76	2.64	0.88	10.16
Leg 4 .	1.76	0.66	2.99	1.01	2.20	3.83	1.14	13.59
Pedipalp .		0.53	2.20	1.23	1.76		1.54	7.26
Chelicera		Basal	0.70	Second	1.54			2.24

Types. Holotype male, Kopuapounamu River, Ruakumara Range, 1,400 feet, East Cape, December, 1950, R. K. Dell, J. M. Moreland (D.M.2/303); Allotype female, same data (D.M.2/304); Paratypes: same data, 3 ♂, 3 ♀ (C.M.A 227); Te Aroroa, December 1950, R. K. Dell, J. M. Moreland, 8 ♂, 10 ♀ (D.M.2/306); same locality, January, 1951, D. Hurley, 2 (C.M.A. 230); Pukeamaru, December 1950, R. K. Dell, J. M. Moreland, 2 ♂, 3 ♀ (D.M.2/307); Anonaia, East Cape, January, 1950, D. Hurley, 1 ♂, 2 ♀ (C.M.A. 229); Motu River Bridge, Opotiki, January, 1951, D. Hurley, 1 ♂ (C.M.A. 228).

Remarks. This sub-species is restricted to the East Cape district. It is separated from both *prehensor* and *obesa* by the reduction in size of the ocular spine in the male and complete absence in the female.

Soerensenella bicornis Pocock, 1903

1903 *Soerensenella bicornis* Pocock, Ann. Mag. Nat. Hist. Ser.7 (11), p.439
1914 *Soerensenella bicornis* Pocock, Roewer, Arch.Naturg. 80A (12), p.94
1923 *Soerensenella bicornis* Pocock, Roewer, Die Weberknechte der Erde, p.600
1931 *Akaroa formosa* Roewer, Zeits, f.zool., 138 (1), p.169

Figs. 668-673

Male

Colour. General colour yellowish-brown, with a black band down the sub-lateral and posterior surfaces of the scute. Free tergites and the sternites shaded with black.

Body. The eyemound is twice as wide as it is deep, separated from the anterior margin of the carapace by a distance equal to one and one-third of its width, with an erect apical spine which is equal in height to the eye-mound proper (Fig. 669). There are three small spinous projections on the antero-median surface of the carapace and a larger, anteriorly directed projection at each anterior corner. There is a strong spinous projection on the antero-lateral surface which is directed laterally and a further smaller process on the lateral margin of the carapace at about mid-way. (Fig. 668). A shallow ridge extends across the anterior margin of the carapace, bearing a pair of small tubercles on the mid-surface. The scutal groove is distinct on the median surface, tergal areas defined by similar grooves. Areas 1-4 with a pair of spinous tubercles, stronger on Areas 3 and 4, more widely spaced on Area 4. The posterior margin of the scute and the free tergites are provided with a transverse row of numerous small tubercles. Sternites with small granules. Genital operculum smooth.

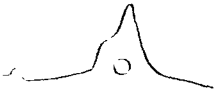
Genitalia. Differing slightly from *prehensor* as shown in Figs. 670, 671.

Chelicerae. Disto-dorsal surface of basal segment swollen, with a small tubercle on the outer proximal surface, and a strong spinous tubercle on the mid-disto-dorsal surface. There is a row of from 4-5 small tubercles on the dorsal surface of the second segment.

Pedipalps (Fig. 672). Trochanter with a strong spinous tubercle on the ventral surface. The femur is stout, proximo-ventral surface swollen, bearing two strong spinous tubercles. Two more massive tubercles are present on the mid-ventral surface, one pro- one retro-ventral in position, followed by two further, similarly disposed, but smaller tubercles. There is a strong spinous tubercle on the ventral surface at about three-quarters of its length. The dorsal surface is armed with seven spinous tubercles arranged 1.1.1.2.1.1. The two distal tubercles are relatively small. Patella with two pro-lateral tubercles, one median, one distal in position. The patella and tibia are closely covered with small rounded tubercles on the dorsal surface. Tibia and tarsus with ventral tubercles, stronger and apically flattened on the tibia. The latero-ventral margins of both tibia and tarsus are provided with four spinous tubercles. Tarsus with fourth pro-ventral and first retro-ventral small.

Legs. There are four tubercles on the pro-ventral margin of coxa 1, distal bifid. Legs sparsely covered with small granules. Tarsal formula 4.11-12.4.4.

Measurements		Scute	Length	3.52	Width	3.74		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.10	0.48	1.89	0.88	1.54	2.11	1.06	9.06
Leg 2 ..	1.76	0.53	3.08	1.10	2.77	3.30	2.33	14.87
Leg 3 ..	1.54	0.62	2.33	1.01	2.07	3.08	1.06	11.71
Leg 4 ..	1.76	0.70	3.17	1.10	2.64	3.92	1.32	14.61
Pedipalp ..		0.53	3.08	1.76	2.20		1.94	9.51
Chelicera ..		Basal	1.19	Second	1.76			2.95



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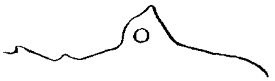

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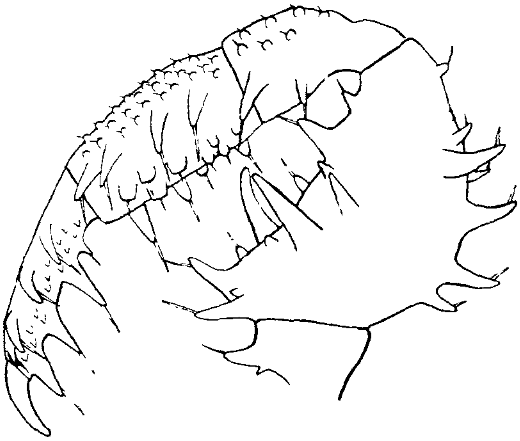

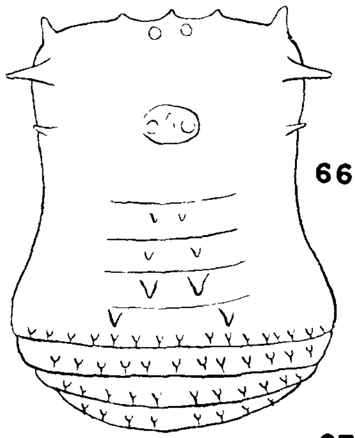

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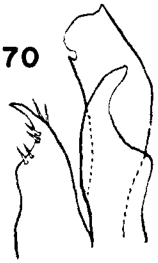

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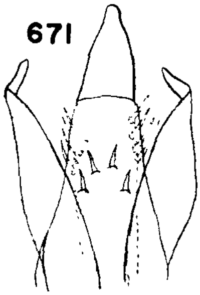

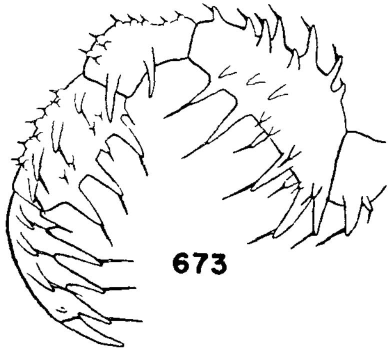

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FIGS. 668-673 *Soerensenella bicornis* Hogg

Fig. 668 Dorsal surface body of male; Fig. 669 Lateral view eyemound of male; Fig. 670 Lateral view male genitalia; Fig. 671 Ventral view male genitalia; Fig. 672 Pro-lateral surface male pedipalp; Fig. 673 Pro-lateral surface female pedipalp;

Fig. 674 *Soerensenella bicornis parva* n.s.sp. Lateral view eyemound of male.

Female. The spinous processes on the scute are reduced in size. The median pairs of tubercles on Areas 1 and 2 are reduced to small granules. The apical spine of the eyemound is relatively smaller than the male. The pedipalps are more slender and tubercles are relatively slender and longer. The strong spinous tubercles on the median ventral surface of the femur of the male are represented by small inconspicuous tubercles (Fig. 673). Tarsal formula 3.11.4.4.

Measurements Scute Length 3.30 Width 3.74

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.06	0.44	1.58	0.79	1.32	1.67	0.97	7.83
Leg 2 ..	1.67	0.44	2.51	0.88	2.42	3.08	1.76	12.76
Leg 3 ..	1.19	0.57	1.98	0.84	1.76	2.64	0.92	9.90
Leg 4 ..	1.76	0.57	2.42	0.92	2.42	3.67	1.19	12.95

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Tota
Pedipalps ..		0.44	2.20	0.88	1.76		1.32	6.60
Chelicera ..		Basal	0.92	Second	1.32			2.24

Types. Male and female syntypes, Christchurch, in British Museum, Natural History, London.

Records. Fishermans Bay, Akaroa, April 22, 1950, L. P. Hughson, 4 ♂, 4 ♀ (C.M.A. 213); Paua Bay, Akaroa, April 23, L. P. Hughson, 1 ♂, 2 ♀ (C.M.A. 410); Akaroa, October 14, 1949, R. R. Forster, 6 ♂, 8 ♀ (C.M.A. 210, D.M.2/290); same locality, October 13, 1920, G. Archey, 1 ♀ (C.M.A. 211); Kaituna Valley, September 11, 1949, R. R. Forster, 7 ♂, 10 ♀ (C.M.A. 214); Okuti Valley, December 10, 1950, R. R. Forster, 1 ♂ (C.M.A. 215); Kennedy's Bush, November 30, 1948, R. R. Forster, 2 ♂, 3 ♀ (D.M.2/408), Oxford, 1928, Coll. ?, 1 ♀ (C.M.A. 212).

Remarks. There can be little doubt that *Akaroa formosa* Roewer is synonymous with *bicornis.* Roewer's figure is that of a female. The specimen recorded from Mount Algidus, Rakaia Gorge, will probably prove to belong to *parva* n.s.sp.

Soerensenella bicornis parva n.s.sp.

Fig. 674

Male

Colour. The colouration is similar to *bicornis.*

The eyemound is provided with a small apical spine, equal to only half of the height of the eyemound proper. There is a pair of small granules on the median surfaces of Areas 1-4 and a row of small tubercles on the posterior margin of the scute and the free tergites. The structure of the pedipalps, chelicerae and genitalia are similar to *bicornis.* Tarsal formula 4, 10-13, 4, 4.

Measurements

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
		Scute	Length	3.08	Width	3.34		
Leg 1 ..	1.14	0.40	1.14	0.75	1.36	1.67	0.88	7.34
Leg 2 ..	1.54	0.44	3.20	0.84	2.11	2.95	1.98	13.06
Leg 3 ..	1.19	0.44	1.50	0.80	1.54	2.33	0.70	8.50
Leg 4 ..	1.67	0.57	2.38	0.92	2.20	3.52	0.66	11.92
Pedipalp ..		0.31	2.55	1.32	1.85		1.76	7.79
Chelicera ..		Basal	0.53	Second	1.28			1.81

Female. Similar in general structure to male. Pedipalps more slender. Tarsal formula 3, 9-11, 4, 4. The specimens from Arthur's Pass, Cass, and Crow River are pale-yellow with faint greyish shading on the scute and are slightly smaller. When the males are found it might be necessary to separate these specimens as a distinct sub-species.

Measurements

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
		Scute	Length	2.73	Width	3.08		
Leg 1 ..	0.97	0.35	1.14	0.62	1.06	1.32	0.53	5.99
Leg 2 ..	1.10	0.31	1.58	0.75	1.85	1.94	1.76	9.29
Leg 3 ..	1.01	0.35	1.63	0.66	1.32	1.80	0.75	7.52
Leg 4 ..	1.32	0.44	1.76	0.75	1.54	2.86	0.88	9.55
Pedipalp ..		0.26	1.32	0.88	1.19		1.10	4.75
Chelicera ..		Basal	0.62	Second	1.10			1.72

Types. Holotype male, Peel Forest, January 20, 1951, R. R. Forster (C.M.A. 216); Allotype female, same data (C.M.A. 217); Paratypes, same data, 5 ♂, 1 ♀ (C.M.A. 220); same locality, February 8, 1946, R. R. Forster, 6 ♂, 9 ♀ (D.M.2/291).

Records. Kakahu, Geraldine, April 30, 1950, R. R. Forster, 5 ♂, 7 ♀ (C.M.A. 220); Geraldine Bush, December 11, 1937, A. W. Parrott, 1 ♀ (C.M.A. 219); Arthur Pass, April 9, 1950, R. Jenkin, 12 ♀ (C.M.A. 221, 222, D.M.2/292); Cass, March 8, 1920, Coll. ?, 2 ♀ (C.M.A. 223); Crow River, Waimakariri, December 1, 1950, I. Cresswell, 2 ♀ (C.M.A. 790).

Remarks. Separated from *bicornis* by the smaller size, reduced ocular spine and scutal spines.

Soerensenella bicornis waikanae n.s.sp.

Figs. 675-676

Male. The anterior margin of the carapace is smooth. A strong, laterally directed spinous process is present on the antero-lateral surface of the carapace but the smaller tubercles present on the mid-lateral surface of *bicornis* are absent (Fig. 675). A scutal groove is present and the tergal areas are defined by transverse grooves. Areas 1 and 2 are smooth, Areas 3 and 4 have a median pair of small conical tubercles and a number of smaller rounded tubercles. The posterior margin of the scute and the free tergites are provided with numerous small tubercles as in *bicornis*.

The pedipalps differ only slightly as shown in Fig. 676.

Genitalia as in *prehensor*. Tarsal formula 3.9.4.4.

Measurements

		Scute	Length	3.08	Width	3.05		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.88	0.31	1.76	0.79	1.36	1.98	0.75	7.83
Leg 2 ..	1.54	0.44	2.42	1.06	2.42	2.86	1.76	12.50
Leg 3 ..	1.41	0.48	1.98	0.75	1.58	2.28	0.97	9.45
Leg 4 ..	1.76	0.57	2.38	1.01	2.20	3.17	1.10	12.19
Pedipalp ..		0.44	2.20	1.06	1.76		1.54	7.00
Chelicera ..		Basal	0.70	Second	1.14			1.84

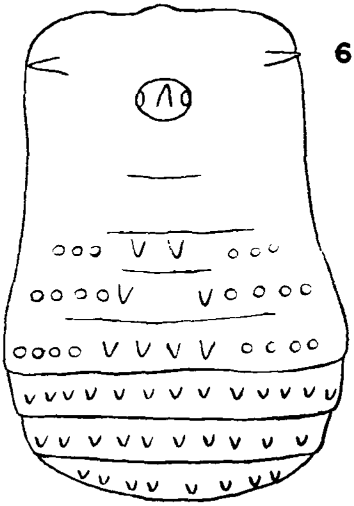
Female. Similar in general structure to male. Scutal tubercles reduced in size. Pedipalps more slender. Tarsal formula 3.9.4.4.

Measurements

		Scute	Length	3.30	Width	3.70		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.06	0.35	1.58	0.75	1.32	1.54	0.88	7.48
Leg 2 ..	1.41	0.44	2.29	0.92	2.33	2.86	1.58	11.83
Leg 3 ..	1.10	0.44	1.80	0.75	1.54	2.42	0.88	8.93
Leg 4 ..	1.54	0.57	2.64	0.88	2.20	3.34	1.14	12.31
Pedipalps ..		0.43	1.76	0.87	1.55		1.54	6.15
Chelicera ..		Basal	0.88	Second	1.23			2.11

Types. Holotype male, Waikanae, January 19, 1923, G. Archey (C.M.A. 725); Allotype female, same data (C.M.A. 726).

Remarks. The absence of a second spine on the lateral margin and tubercles from the median anterior surface of the carapace separates this sub-species from both *bicornis* and *parva*.



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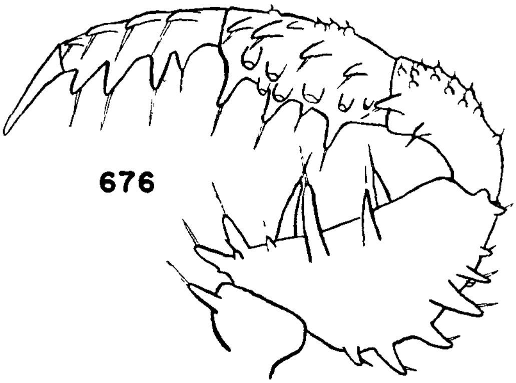

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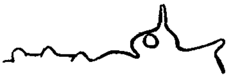

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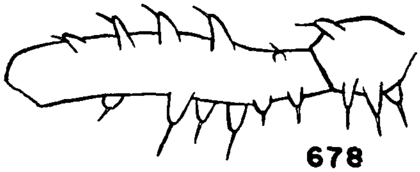

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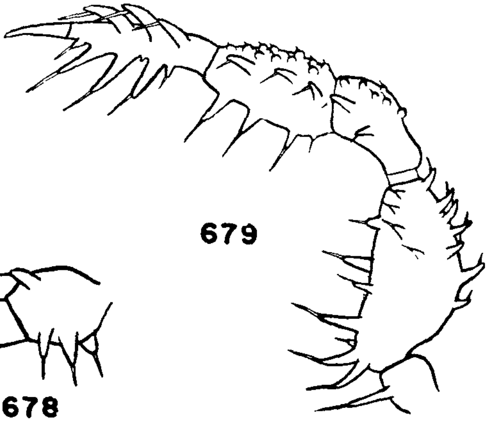

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FIGS. 675-676 *Soerensenella bicornis waikanae* n.s.sp.
Fig. 675 Dorsal surface body of male; Fig. 676 Pro-lateral surface male pedipalp.

FIGS. 677-679 *Soerensenella rotara* (Phillipps and Grimmett)
Fig. 677 Lateral view carapace and eyemound of female; Fig. 678 Trochanter and femur leg 1 of female; Fig. 679 Pro-lateral surface female pedipalp.

Soerensenella rotara Phillipps and Grimmett, 1932

1932, *Soerensenella rotara* Phillipps and Grimmett, Proc.Zool.Soc. London, p.737

Figs. 677-679

Female

Colour. General colour reddish-brown. Body heavily shaded with black. Dorsal surfaces of basal segment of chelicera and pedipalp femur black. Dorsal surfaces of patella and tibia of pedipalp with black reticulate markings. Legs with alternate bands of black and yellow.

Body. Eyemound rounded, with a shallow postero-basal depression and a small apical spine rising from near the anterior margin (Fig. 677). Two small tubercles are present on each anterior corner of the carapace and a pair of small erect pustules on the anterior margin in front of the eyes. Areas 1-4 with a few low tubercles, which do not extend to the lateral margins. Posterior margin of the scute and free tergites each with a transverse row of similar tubercles.

Chelicerae. Disto-dorsal surface of basal segment smooth but swollen. Second segment with a few small dentiform tubercles on the dorsal surface.

Pedipalps (Fig. 679). Dorsal surfaces of femur, patella, tibia and tarsus granulate. Trochanter with a strong spinous tubercle on the ventral surface. Femur with 7-8 dorsal and 4 pro-lateral tubercles. A strong bifid tubercle on the proximo-ventral surface is followed by 5-6 smaller tubercles along the ventral surface. Tibia and tarsus with three strong spinous tubercles on both pro- and retro-ventral margins.

Legs. Femur 1 with a number of prominent tubercles on both dorsal and ventral surfaces (Fig. 678), but legs otherwise mainly smooth but with a few small scattered tubercles. Tarsal formula 3.9.4.4.

Measurements

		Scute	Length	1.80	Width	2.33		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.70	0.26	0.88	0.44	0.62	0.70	0.44	4.04
Leg 2 ..	0.97	0.26	1.36	0.57	1.10	1.14	0.88	6.28
Leg 3 ..	0.79	0.26	1.06	0.44	0.70	1.14	0.44	4.83
Leg 4 ..	1.06	0.31	1.32	0.53	1.10	1.76	0.44	6.52
Pedipalp ..		0.35	1.10	0.48	0.84		0.70	3.47
Chelicera ..		Basal	0.53	Second	0.79			1.32

Types. Holotype female, Rotorua, 1926, R. E. R. Grimmett (D.M.2/285).

Records. Motutaiki, April, 1951, A. C. O'Connor, 4 ♀ (C.M.A. 207); Otukou, April, 1951, A. C. O'Connor, 1 ♀ (C.M.A. 208); Taoroa, Rangitikei, February, 1950, A. C. O'Connor, 2 ♀ (C.M.A. 209); Bold Spur, Te Aroha, May 3, 1946, J. T. Salmon, 1 ♀ (D.M.2/286); Panikiri Bluff, Waikaremoana, December 11, 1946, R. R. Forster, 1 ♀ (D.M.2/287); Mount Ngamoko, Waikaremoana, December 14, 1946, R. R. Forster, 1 ♀ (D.M.2/819); Massey College, Palmerston North, March 21, 1943, R. R. Forster, 4 ♀ (D.M.2/284); Mangarei, Wairarapa, October 20, 1943, C. L. Wilton, 1 ♀ (D.M.2/365).

Remarks. The small size of this species distinguishes it from all other members of this genus. It is interesting to note that although 16 specimens of this species have been collected to date, they are all females.

Genus *KARAMEA* n.gen.

Eyemound with an anteriorly directed spinous process, sometimes small but normally prominent. A spinous process present at each anterior corner of the carapace. Areas 1-4 with small rounded tubercles. Pustules absent. Posterior margin of the scute and free tergites tuberculate. Genital operculum smooth. Pedipalps robust. Legs unarmed. Calcaneus much shorter than astragalus. Tarsal formula 3, 6-9, 4.4. Side branches of claws 3 and 4 much stronger and longer than median prong. Sexual dimorphism evident in pedipalps and development of the ocular spine.

Genotype *Karamea lobata* n.sp.

This genus is separated from *Soerensenella* by the forwardly directed spinous process present on the eyemound.

Key to the species of Karamea

1. Ocular process strongly developed 2
   Ocular process short, present as a small forwardly directed spinous tubercle .... *trailli* (Hogg)
2. Ocular process straight, directed forward 3
   Ocular process strongly curved forward .... *tuthilli* n.sp.
3. Free tergites 2-3 with prominent lateral lobes. Anterior margin of the carapace with small tubercles in addition to the more prominent spinous tubercles 4
   Free tergites 3 and 4 with inconspicuous lateral lobes; anterior margin of the scute with two strong spinous tubercles but no small tubercles........... .... *tricerata* n.sp.
4. Anterior margin of the carapace without a strong median tubercle........... 5
   Anterior margin of the carapace with a strong median tubercle......*lobata* n.sp.
5. General colour of the scute black..........................*lobata australia* n.s.sp.
   General colour of the scute bright orange...................*lobata aurea* n.s.sp.

Karamea lobata n.sp.

Figs. 680-684

Male

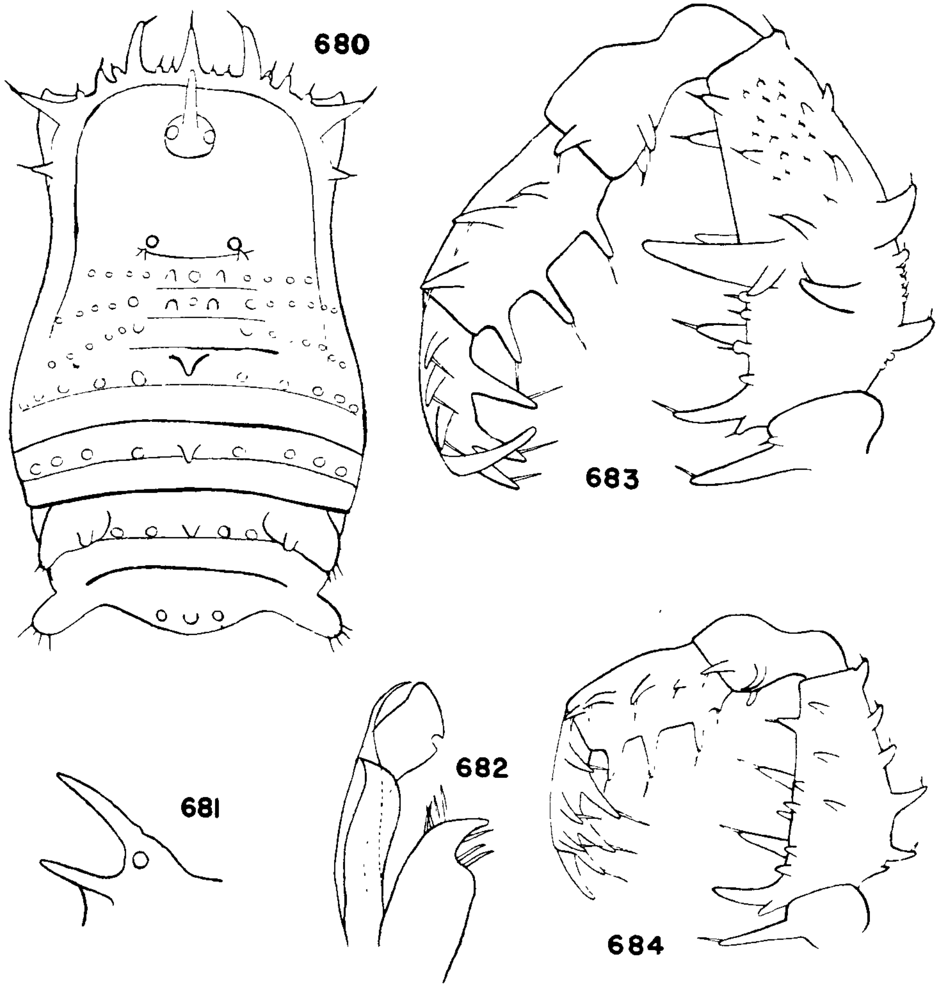
Colour. Entire body and legs blackish. The lateral tubercles of free tergites 2 and 3 are bright orange. Chelicerae and pedipalps heavily covered with black reticulate markings.

Body. The eyemound is separated from the anterior margin of the carapace by a distance equal to slightly less than its width. It is provided with a strong spinous process which is directed obliquely forward as shown in Fig. 681; the length of the process is equal to one and a third times the diameter of the eyemound. There are three strong spinous tubercles on the anterior margin of the carapace in addition to a number of small rounded tubercles as shown in Fig. 680. A strong spinous tubercle present on each anterior corner of the carapace and a smaller tubercle on each lateral margin at approximately one-quarter of the length of the scute. A ridge extends across the anterior margin of the carapace and down the lateral margins of the scute. The scutal groove is present only on the median surface of the scute. There are two small conical tubercles on Area 1, one at each extremity of the scutal groove where they oppose a small rounded tubercle on the posterior margin of the carapace. There are narrow transverse grooves present separating Areas 3-5, each area is armed with a transverse row of low rounded tubercles, Area 5 also with a broad median spinous tubercle. Free tergite 1 with a transverse row of tubercles, median conical, others rounded. Free tergite 2 with a similar row of tubercles and prominent lateral swellings with a small dorsal tubercle as shown in Fig. 680. Free tergite 3 with a deep median groove, strong lateral lobes and three rounded tubercles on the postero-median surface. Genital operculum smooth.

Genitalia. As shown in Fig. 682.

Chelicerae. The disto-dorsal surface of the basal segment is slightly swollen but without tubercles. The second segment is provided with strong tubercles on the proximo-dorsal surface and smaller tubercles on the more distal surface.

Pedipalps. As shown in Fig. 683. The number and disposition of the tubercles is similar to *tricerata* from which it differs mainly in possessing a small accessory



FIGS. 680-684 *Karamea lobata* n.sp.

Fig. 680 Dorsal surface body of male; Fig. 681 Lateral view eyemound of male; Fig. 682 Lateral view male genitalia; Fig. 683 Pro-lateral surface of male pedipalp; Fig. 684 Pro-lateral surface of female pedipalp.

tubercle at the base of the mid-pro-ventral process and three spinous tubercles on the pro-ventral margin of the tibia.

Legs. Coxae and legs similar to *tricerata.* Tarsal formula 3.6-8.4.4.

Measurements

Scute Length 4.53 Width 5.02

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.32	0.79	3.56	1.28	2.16	3.21	0.70	13.02
Leg 2 ..	2.07	0.79	6.12	1.23	4.45	5.97	1.76	22.39
Leg 3 ..	2.10	0.75	3.95	1.32	2.82	5.23	1.14	17.31
Leg 4 ..	2.29	0.92	5.02	1.37	3.70	6.55	1.32	21.17
Pedipalp ..		0.84	5.45	2.20	2.64		2.64	13.77
Chelicera ..		Basal	0.88	Second	1.76			2.64

Female. Smaller than male but similar in structure. The pedipalps are smaller and lack the strong spinous process which is present on the mid-pro-ventral surface of the male (Fig. 684).

Measurements

		Scute	Length	3.87	Width	4.31		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.14	0.75	2.46	1.14	1.76	2.73	0.48	10.46
Leg 2 ..	2.02	0.84	4.43	1.32	3.96	4.79	1.32	18.68
Leg 3 ..	1.80	0.75	3.08	1.14	2.42	4.35	0.88	14.42
Leg 4 ..	2.07	0.88	4.10	1.41	3.43	6.99	1.14	20.02
Pedipalp ..		0.70	3.30	1.05	2.16		1.89	9.11
Chelicera ..		Basal	0.75	Second	1.76			2.51

Types. Holotype male, South Terrace, Karamea, January 20, 1950, R. R. Forster (C.M.A. 146); Allotype female, same data (C.M.A. 147); Paratypes: same data, 6 ♂, 12 ♀ (C.M.A. 148, D.M.2/245); Karamea Bluff, January 20, 1950, R. R. Forster, 2 ♂ (C.M.A. 149).

Records. Blackwater River, Inangahua, February 10, 1952, W. Clark, 1 ♂ (C.M.A. 688).

Karamea lobata aurea n.s.sp.

Figs. 685-689

Male

Colour. The body is bright orange. The ground colour of the appendages is similar but the chelicerae has black reticulate markings on the dorsal surface and the legs are shaded with black.

Body. The eyemound is provided with a strong spinous process directed horizontally forward from the anterior margin which is similar to, but broader than that of *australis* (Fig. 686), its length is equal to one and one-quarter times the width of the eyemound. The tergal region is as shown in Fig. 685, similar to *lobata* but the tubercles do not extend as far laterally. The lateral lobes of free tergites 2 and 3 are as shown in Fig. 685. The tubercles on the anterior and lateral margins of the carapace are as in *australis* but the tubercle on each anterior corner is stronger.

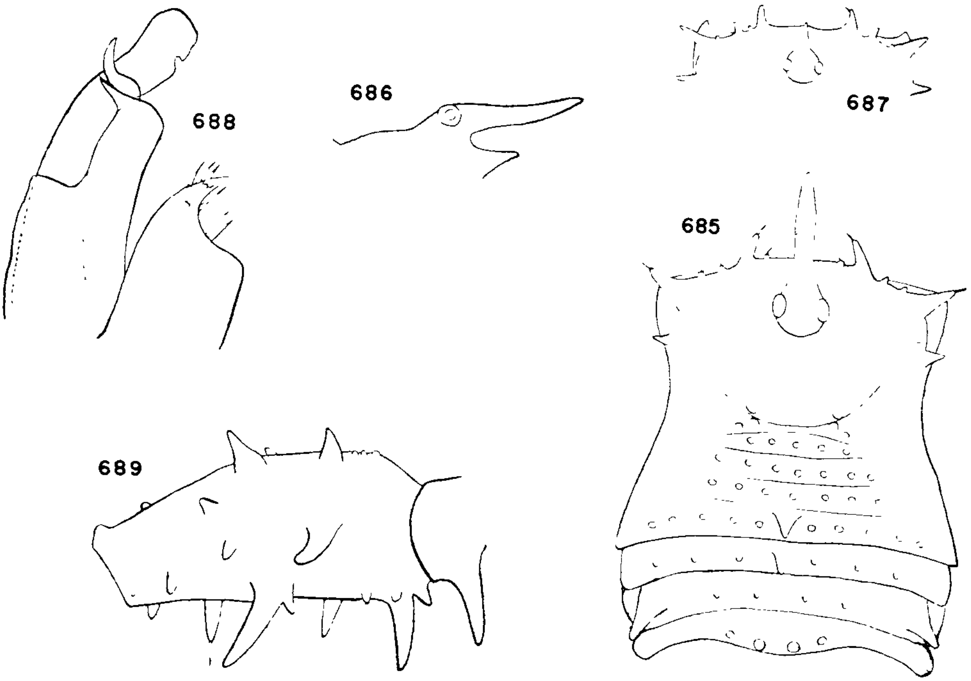
Genitalia. As in Fig. 688.

The chelicerae and pedipalps (Fig. 689) are as in *lobata*.

Measurements

		Scute	Length	4.57	Width	5.89		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.72	1.10	3.92	1.54	2.42	3.70	0.66	15.06
Leg 2 ..	2.64	1.10	6.55	1.76	5.45	6.55	1.63	25.68
Leg 3 ..	2.29	0.97	4.43	1.54	3.21	5.62	1.41	19.47
Leg 4 ..	2.68	1.14	5.23	1.85	4.22	8.50	1.58	25.20
Pedipalp ..		0.66	5.23	3.17	3.08		3.08	15.22
Chelicera ..		Basal	1.76	Second	2.60			4.36

Female. The spinous process on the eyemound is smaller, equal to four-fifths of the diameter of the eyemound (Fig. 687). Pedipalps smaller, similar in spination to *lobata*.



FIGS. 685-689 *Karamea lobata aurea* n.s.sp.

Fig. 685 Dorsal surface body of male; Fig. 686 Lateral view eyemound of male; Fig. 687 Antero-dorsal surface body of female; Fig. 688 Male genitalia; Fig. 689 Trochanter and femur male pedipalp.

Measurements Scute Length 3.70 Width 4.83

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.32	0.88	2.68	1.14	1.80	4.10	0.66	12.58
Leg 2 ..	2.20	0.79	4.39	1.41	4.11	4.79	1.58	19.27
Leg 3 ..	1.76	0.97	3.30	1.14	2.51	4.76	1.01	15.45
Leg 4 ..	2.33	0.88	4.79	1.32	3.52	7.22	1.32	21.38
Pedipalp ..		0.70	3.30	1.76	2.20		2.24	10.20
Chelicera ..		Basal	1.10	Second	1.89			2.99

Types. Holotype male, Oparara, Karamea, January 27, 1950, R. R. Forster (C.M.A. 150); Allotype female, same data (C.M.A. 151); Paratypes: same data, 3 ♂, 1 ♀ (C.M.A. 152, D.M.2/246); same locality, March 4, 1949, A. C. O'Connor, 1 ♂, 2 ♀ (C.M.A. 153).

Remarks. This sub-species can be distinguished from both *lobata* and *australis* by the bright orange colouring of the scute in contrast to the black colouration of the latter two forms. It is structurally more close to *australis* but is much larger and the spinous process of the eyemound is more strongly developed. This sub-species is limited in its distribution, being found only at Oparara, north of the Karamea River. On the south side of this river (about 150 yards) only *lobata* is found.

Karamea lobata australis n.s.sp.

Figs. 690-692

Male

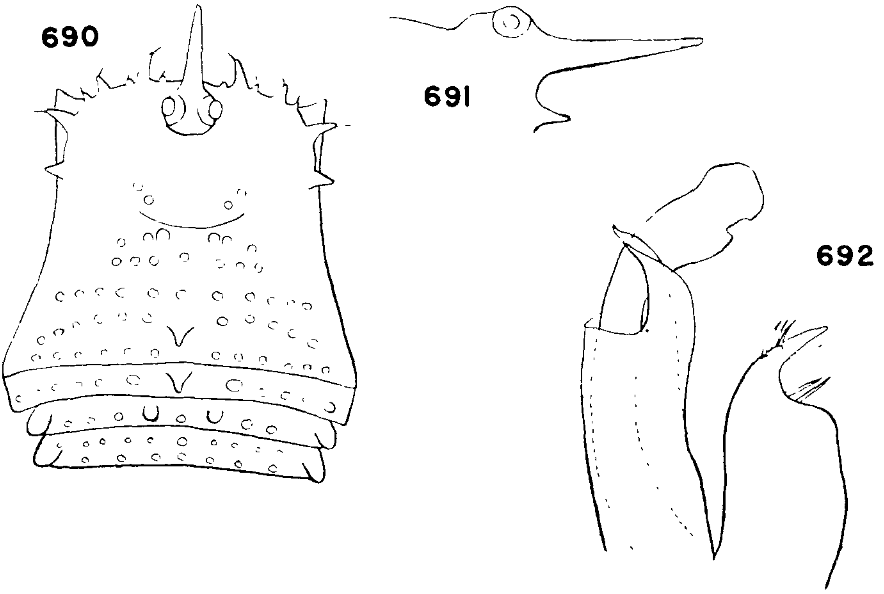
Colour. The entire animal is uniform black, distinguished immediately from *lobata* by the absence of the bright orange colouring of the lateral margins of the free tergites.

Body. The ocular process is strong, directed horizontally forward, well beyond the anterior margin of the carapace (Fig. 691), its length being equal to one and a half times the width of the eyemound. The spination of the anterior and lateral margins of the carapace is similar to *lobata*, but the tubercles are smaller and the median anterior tubercle is absent. The tergal areas are indicated by transverse rows of small tubercles as in *lobata* but there are no grooves visible between the areas. There are only small and simple lobes on the lateral margins of free tergites 2 and 3 (Fig. 690).

Genitalia. This differs slightly from *lobata* as shown in Fig. 692. Chelicerae, pedipalps and legs as in *lobata*.

Measurements

		Scute	Length	3.52	Width	4.26		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.32	0.75	2.42	1.10	1.54	2.64	0.40	10.17
Leg 2 ..	2.11	0.84	4.35	1.28	3.30	4.57	0.92	17.37
Leg 3 ..	1.76	0.66	2.64	1.19	2.24	3.65	0.79	12.93
Leg 4 ..	1.85	0.88	3.34	1.32	2.99	5.89	1.06	17.33
Pedipalp ..		0.57	3.70	1.85	2.24		1.85	10.21
Chelicera ..		Basal	0.97	Second	1.50			2.47



FIGS. 690-692 *Karamea lobata australis* n.s.sp.

Fig. 690 Dorsal surface body of male; Fig. 691 Lateral view eyemound of male; Fig. 692 Male genitalia.

Female. Similar to male in structure. The pedipalps are smaller and similar in structure to the female of *lobata.* The ocular spine is more slender and its length is equal to the width of the eyemound.

Measurements

		Scute	Length	3.30	Width	4.26		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.28	0.75	1.94	1.01	1.36	2.29	0.48	9.11
Leg 2 ..	1.67	0.79	3.70	1.28	3.12	2.92	0.92	14.40
Leg 3 ..	1.41	0.66	2.51	1.10	2.20	3.48	0.88	12.24
Leg 4 ..	2.02	0.79	3.08	1.14	2.86	5.67	1.01	16.57
Pedipalp ..		0.48	2.55	1.32	1.80		1.89	8.04
Chelicera ..		Basal	1.01	Second	1.54			2.55

Types. Holotype male, Mount Davie, Greymouth, January 24, 1950, R. R. Forster (C.M.A. 157); Allotype ♀, same data (C.M.A. 157); Paratypes: same data, 2 ♂, 1 ♀ (C.M.A. 158, D.M.2/247); 12-mile, Greymouth, January 20, 1950, R. R. Forster, 1 ♀ (C.M.A. 160); Marsdon Road, Greymouth, November 1, 1950, L. P. Hughson, 1 ♂ (C.M.A. 161); Bullock Creek, Punakaiki, January 18, 1950, R. R. Forster, 5 ♂, 7 ♀ (C.M.A. 159).

Records. Pororari, March, 1949, A. C. O'Connor, 2 ♀ (C.M.A. 163).

Remarks. Distinguished from both *lobata* and *aurea* by the uniform black colouration and smaller size. Most closely related to *aurea.*

Karamea tricerata n.sp.

Figs. 693-696

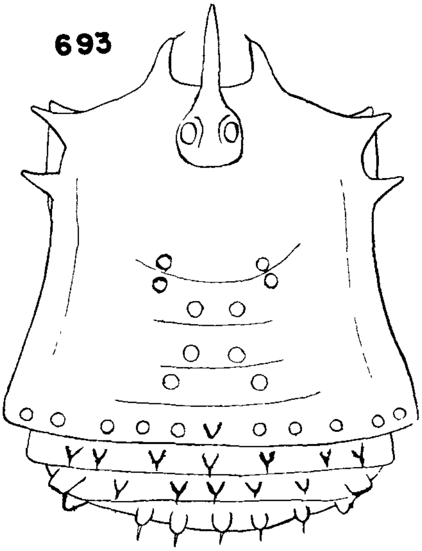
Male

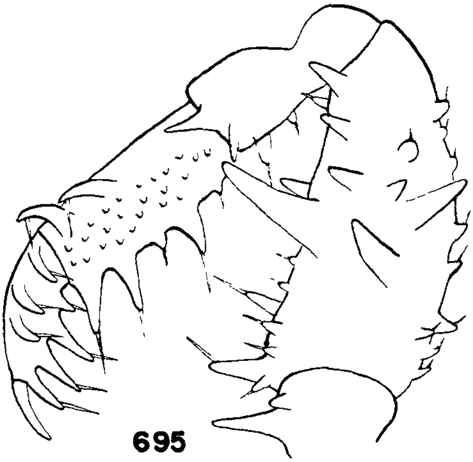
Colour. General colour orange-brown, with black reticulate markings on the carapace and black shading on the tergal region, free tergites and the sternites. Chelicerae and pedipalps with black reticulate markings.

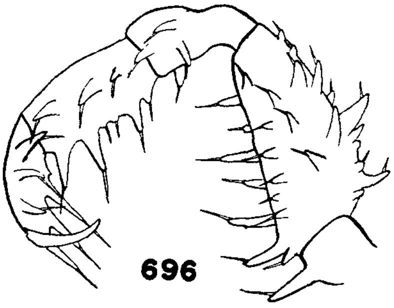
Body. Eyemound with a strong spinous process projecting horizontally from the anterior margin well beyond the edge of the carapace (Fig. 693). The length of the process is equal to one and a half times the width of the eyemound. The anterior margin of the carapace is provided with two strong spines which do not extend to the end of the ocular process. There is a strong spine at each anterior corner of the carapace and a further similar spine on the lateral margin of the carapace at about one-quarter of the length of the scute (Fig. 693). A low ridge extends along the lateral margin of the scute. The scutal groove is visible on the median surface; it is recurved. Tergal Areas 3 and 4 are separated by shallow grooves on the median surface. There are two small rounded tubercles on the posterior surface of the carapace and tergal Areas 1-4 as shown in Fig. 693. There is a transverse row of small tubercles on the posterior margin of the scute, median conical, others rounded. Free tergites each with a transverse row of small tubercles, tergites 2 and 3 with strong lateral lobes.

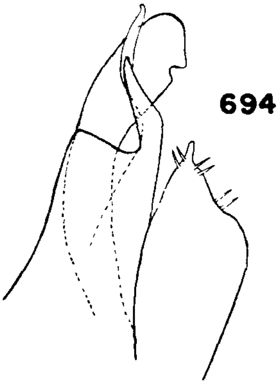
Genitalia. As shown in Fig. 694. Setae small.

Pedipalps (Fig. 694). Trochanter with a strong, slender spinous tubercle on the ventral surface. There are a number of conical tubercles on the ventral surface of the femur, a massive spinous process on the mid-pro-ventral surface and five strong conical tubercles on the distal half of the pro-lateral surface. The dorsal surface is provided with a number of low tubercles. There are two strong spinous tubercles on both pro- and retro-lateral surfaces of the patella. Tibia granulate on the ventral









Figs. 693-696 *Karamea tricerata* n.sp.

Fig. 693 Dorsal surface body of male; Fig. 694 Male genitalia; Fig. 695 Pro-lateral surface of male pedipalp; Fig. 696 Pro-lateral surface female pedipalp.

surface with two strong spinous tubercles on the distal half of the pro-ventral margin and three similar tubercles on the retro-ventral surface. Tarsus with three pro- and four retro-ventral tubercles, first retro-ventral small.

Legs. Coxa 1 with three spinous tubercles on the pro-ventral surface, distal bifid. There are two conical tubercles on the ventral surface of the trochanter of leg 1 and three on the proximo-ventral surface of the femur. Legs otherwise only sparsely covered with low tubercles. Tarsal formula 3.6-8.4.4.

Measurements

		Scute	Length	2.29	Width	2.46		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.66	0.35	1.28	0.48	0.70	1.19	0.44	5.10
Leg 2 ..	1.10	0.48	2.24	0.79	1.76	2.46	0.75	9.58
Leg 3 ..	1.06	0.48	1.36	0.66	1.32	1.89	0.53	7.30
Leg 4 ..	1.23	0.53	1.94	0.84	1.63	3.08	0.70	9.95
Pedipalp ..		0.35	2.16	1.06	1.23		0.88	5.68
Chelicera ..		Basal	0.56	Second	0.87			1.43

Female. The spinous process of the eyemound is similar in form to male but shorter, length equal to only slightly more than the width of the eyemound The pedipalps are relatively smaller as shown in Fig. 696. There is no spinous process on the mid-pro-ventral surface of the femur and the pro-lateral tubercles are reduced in size. Characters otherwise as for male.

Measurements

		Scute	Length	2.46	Width	2.99		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.62	0.35	1.14	0.53	0.84	1.19	0.44	5.11
Leg 2 ..	1.32	0.48	1.98	0.79	1.80	2 20	0.79	9.36
Leg 3 ..	1.10	0.48	1.50	0.66	1 23	1.76	0.48	7.21
Leg 4 ..	1.54	0.53	1.89	0.66	1.58	3.08	0.66	9.94
Pedipalp ..		0.26	1.72	0.88	0.92		0.84	4.62
Chelicera ..		Basal	0.48	Second	0.79			1.27

Types. Holotype male, Canaan Track, Takaka, Nelson, December 1948, A. C. O'Connor (C.M.A. 165); Allotype female, same data (C.M.A. 166); Paratypes; same data, 10 ♂, 9 ♀ (C.M.A. 167, D.M.2/248); same locality, November 1951, A. C. O'Connor, 11 ♂, 66 ♀ (C.M.A. 168).

Records. Awarua Bay, December 1948, A. C. O'Connor, 2 ♀ (C.M.A. 172); Kairuru, 1,800 feet, December 1948, A. C. O'Connor, 3 ♂, 6 ♀ (C.M.A. 174); Bainham, February 1949, A. C. O'Connor, 1 ♀, 2 imm. (C.M.A. 176); Riwaka Valley, January 1949, A. C. O'Connor, 1 ♀ (C.M.A. 175); South Terrace, Karamea, January 20, 1950, R. R. Forster, 3 ♂, 5 ♀ (C.M.A. 170); Karamea Bluff, March 4, 1949, A. C. O'Connor, 1 ♂, 1 ♀ (C.M.A. 171); Flora Saddle, 3,200 feet, Mount Arthur District, February 23, 1946, J. T. Salmon, 1 ♂, 2 ♀ (D.M.2/259); Mount Arthur Track, 2,600 feet, January 22, 1948, R. R. Forster, 1 ♂, 3 ♀ (D.M.2/252); Leslie Valley Track, Mount Arthur District, January 24, 1948, J. T. Salmon, 1 ♀ (D.M.2/256); Mount Balloon, 4,100 feet, Mount Arthur Tableland, January 26, 1948, R. R. Forster, 2 ♀ (D.M.2/258).

Remarks. This species is relatively widespread, coinciding with the range of the *lobata* and *aurea* but also extending further north. It is distinguished by its smaller size and absence of small tubercles from the anterior margin of the carapace.

Karamea tuthilli n.sp.

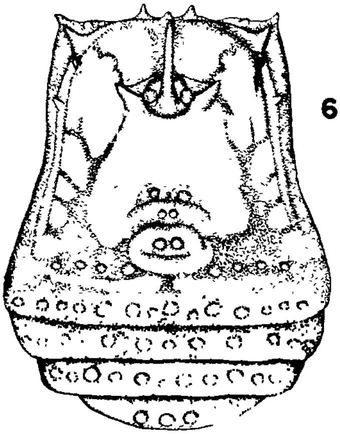
Figs. 697-702

Male

Colour. General colour orange-brown, with black markings on the lateral and posterior margins of the scute and the free tergites as shown in Fig. 697. Chelicerae and pedipalps with black reticulate markings.

Body. The eyemound is produced apically into a strong spinous process which curves gently forward. The length of the process is more than twice the height of the eyemound (Fig. 698). A sharp ridge extends from each mid-lateral surface of the eyemound to terminate as a strong spine as shown in Figs. 697, 698.

There is a ridge extending across the anterior margin of the carapace and down the lateral margins of the scute. There are three small spines on the median portion of the anterior margin of the carapace and a similar spine at each lateral corner. A much stronger spine is present behind each anterior corner of the carapace where it arises from the ridge, which bears a further smaller spine on the lateral margin at about one-quarter of the length of the scute. Scutal groove not visible. There are pairs of small rounded tubercles on the median surfaces of Areas 1-3, Areas 2



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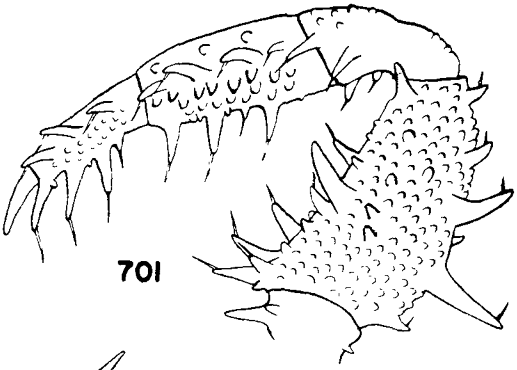

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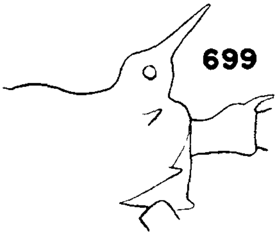

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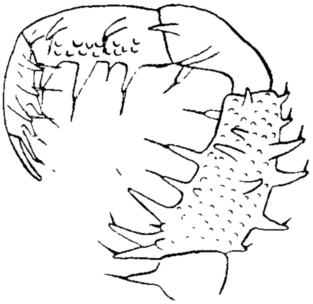

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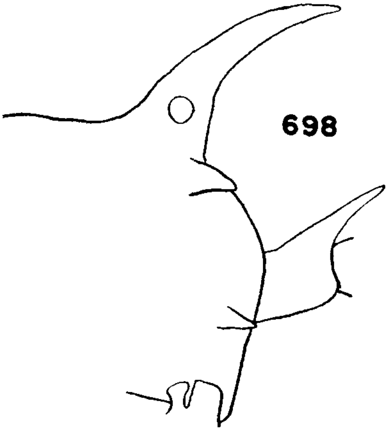

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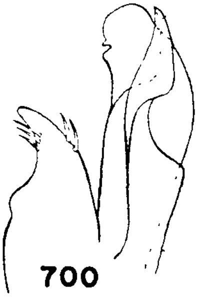

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FIGS. 697-702 *Karamea tuthilli* n.sp.

Fig. 697 Dorsal surface body of male; Fig. 698 Lateral view anterior portion of body and basal segment of chelicera of male; Fig. 699 As above of female; Fig. 700 Male genitalia; Fig. 701 Pro-lateral surface male pedipalp; Fig. 702 Pro-lateral surface female pedipalp.

and 3 slightly raised on the median surface. Tergal areas 4 and 5 and free tergites with a transverse row of similar tubercles as shown in Fig. 697. Genital operculum smooth.

Genitalia. Typical, as shown in Fig. 700.

Chelicerae. Basal segment with a strong spinous process on the disto-dorsal surface which is almost equal in length to the segment itself. (Fig. 698) Second segment with 3-4 small tubercles on the proximo-dorsal surface.

Pedipalps (Fig. 701). The entire surface of the femur and the ventral surfaces of tibia and tarsus are strongly granulate. Trochanter with a strong spinous tubercle on the ventral surface. There are five tubercles on the dorsal surface of the femur, of which the second and fourth are long and spinous. There is a group of three spinous tubercles on the proximo-ventral surface, inner smallest, and three further tubercles evenly spaced along the proximal two-thirds of the ventral surface. There is a strong spinous tubercle on the mid pro-ventral surface and a smaller tubercle on the distal pro-ventral surface. Patella with two spinous tubercles on both pro- and retro-lateral surfaces. Tibia with four tubercles on both pro- and retro-ventral surfaces, first pro-ventral and second retro-ventral small. Tarsus with three pro-ventral and four retro-ventral, first retro-ventral small.

Legs. Pro-ventral margin of coxa 1 with three spinous tubercles, distal bifid. There are two conical tubercles on the retro-lateral surface of coxa 2, distal stronger. Legs smooth. Tarsal formula 3.7-9.4.4.

Measurements

		Scute	Length	3.92	Width	4.18		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.28	0.70	3.08	1.32	2.11	3.43	0.88	12.80
Leg 2 ..	1.98	0.75	3.96	1.14	3.43	4.80	1.98	18.04
Leg 3 .	1.76	0.71	2.86	1.19	2.42	3.74	1.10	13.78
Leg 4 ..	1.89	0.88	4.14	1.32	3.17	6.12	1.54	19.06
Pedipalp ..		0.70	3.34	1.80	2.55		2.11	10.50
Chelicera ..		Basal	0.70	Second	1.67			2.37

Female. Differing from male as follows:—The ocular spine is straight, directed obliquely forward, equal in length to the height of the eyemound proper (Fig. 699). The spinous process from the disto-dorsal surface of the basal segment of the chelicera is smaller than male. The pedipalp is much smaller, provided with spinous tubercles as shown in Fig. 702.

Measurements

		Scute	Length	3.61	Width	4.14		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.14	0.62	2.33	0.88	1.76	2.64	0.75	10.12
Leg 2 ..	1.80	0.66	3.61	1.06	3.12	3.92	1.76	15.93
Leg 3 ..	1.58	0.66	3.08	0.97	2.24	3.70	0.97	13.20
Leg 4 ..	1.98	0.66	2.90	1.19	2.86	5.02	1.32	15.93
Pedipalp ..		0.48	2.29	1.32	1.63		1.45	7.17
Chelicera ..		Basal	0.79	Second	1.58			2.37

Types. Holotype male, Hermitage Bush, Mount Cook, January 20, 1951, R. R. Forster and L. D. Tuthill (C.M.A. 177); Allotype male, same data (C.M.A. 179); Paratypes: same data, 2 ♂, 5 ♀, 7 imm. (C.M.A. 178, D.M.2/260).

Remarks. The striking curved spinous ocular process and strongly tuberculate pedipalp femur sets this species apart from all other known species. The species is named for Dr. L. D. Tuthill of the University of Hawaii, whom the writer had the privilege of accompanying during a productive collecting tour through Otago and Southland.

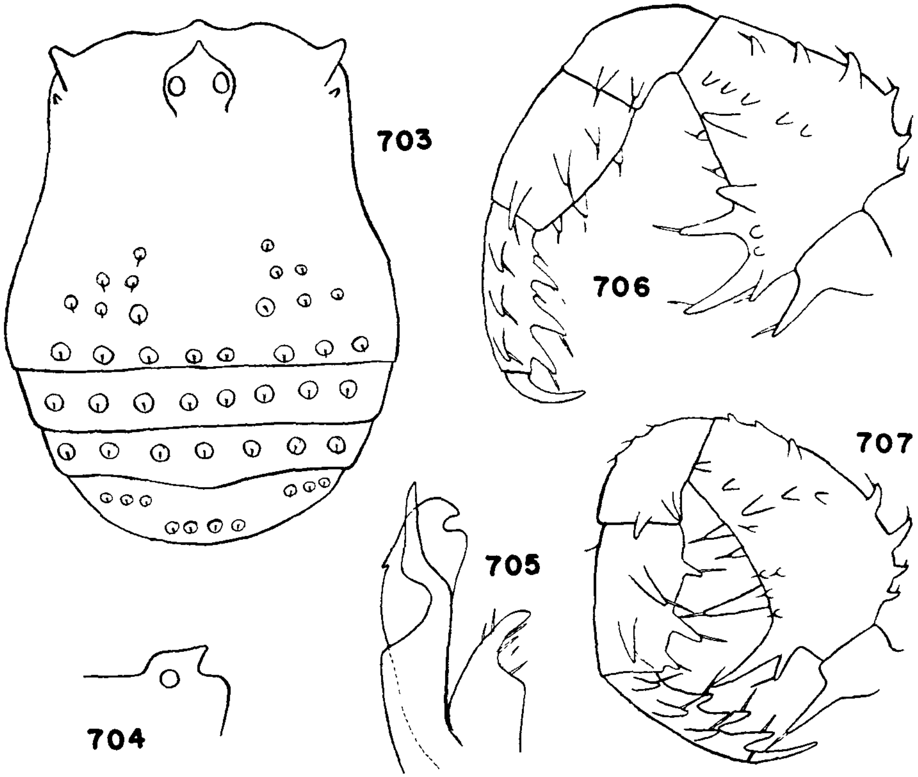
Karamea trailli (Hogg, 1920)

1920, *Monoxyomma trailli* Hogg, Proc. Zool. Soc. London, p.45
1931 *Soerensenella bicornis* Pocock, Roewer, Zeits.f.zool. 138 (1), p.155

Figs. 703-707

Male

Colour. The general colour is orange-brown, with dark shading on the lateral and posterior margins of the scute and the free tergites as shown in Fig. 703. Chelicerae and pedipalps with black reticulate markings.



FIGS. 703-707 *Karamea traillì* (Hogg)
Fig. 703 Dorsal surface body of male; Fig. 704 Lateral view of eyemound; Fig. 705 Male genitalia; Fig. 706 Pro-lateral surface male pedipalp; Fig. 707 Pro-lateral surface female pedipalp.

Body. The eyemound tapers apically into a short, sharp spine, which is directed obliquely forward, as shown in Fig. 704. It is separated from the anterior margin of the carapace by a distance equal to two-fifths of the width. There is a strong, spinous, forwardly directed tubercle on each anterior corner of the carapace, with a further small, more posteriorly situated tubercle. The scutal groove is shallow, restricted to the median surface. The median surface of the scutal region is smooth, but there are six small rounded tubercles on each mid-lateral surface arranged 1.2.3 antero-posteriorly (Fig. 703). The posterior margin of the scute and free tergites 1 and 2 are each provided with a transverse row of similar tubercles. Third free tergite with two lateral groups of three and a median group of four similar tubercles. Sternites with smaller tubercles. Genital operculum smooth.

Genitalia. As shown in Fig. 705.

Chelicerae. Disto-dorsal surface of basal segment swollen, provided with a small tubercle. Second segment with three stronger tubercles on the proximo-dorsal surface.

Pedipalps (Fig. 706). Trochanter with a strong, sharp ventral tubercle. Femur stout, with six dentiform tubercles on the dorsal surface, and an oblique row of five smaller tubercles across the distal half of the pro-lateral surface. There are two tubercles on the proximo-ventral surface, the inner tubercle small, the outer strong and spinous, and a further similarly strong tubercle more anteriorly situated. There are two strong spinous tubercles on the mid-pro-ventral surface and two smaller tubercles on the mid-retro-ventral surface. Patella with two small tubercles on the distal pro-lateral surface. Both pro- and retro-ventral margins of tibia and tarsus with three strong spinous tubercles.

Legs. Pro-ventral margin of coxa 1 with three strong tubercles, distal bifid. Retro-lateral surface of coxa 2 and pro-ventral surface of coxa 4 with small pustules. There are 4-5 small tubercles on the ventral surface of the trochanter of leg 1 and 5-6 along the ventral surface of the femur. Legs otherwise smooth. Tarsal formula 3.6-7.4.4.

Measurements

Scute Length 3.83 Width 4.11

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.19	0.62	1.67	0.66	1.63	2.20	0.48	8.45
Leg 2 ..	2.20	0.62	2.73	0.92	2.42	3.08	1.32	13.29
Leg 3 ..	1.76	0.66	2.20	0.97	1.76	2.86	1.19	11.40
Leg 4 ..	1.21	0.70	3.08	1.01	2.64	4.13	0.97	13.74
Pedipalp ..		0.57	2.37	1.41	1.74		1.80	7.89
Chelicera .		Basal	0.92	Second	2.20			3.12

Female. Similar in structure to male. The pedipalp is less robust, the two strong spinous tubercles on the pro-ventral surface of the femur of the male are represented in the female by two small pustules as shown in Fig. 707.

Measurements

Scute Length 3.78 Width 4.80

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	1.10	0.62	2.20	0.97	1.50	2.24	0.57	9.20
Leg 2 ..	1.89	0.53	2.95	1.23	2.86	2.52	1.14	13.12
Leg 3 ..	1.54	0.53	2.42	1.01	1.98	3.08	0.88	11.44
Leg 4 ..	1.94	0.75	3.08	1.10	2.64	4.36	0.97	14.84
Pedipalp .		0.61	1.98	1.14	1.98		1.32	7.03
Chelicerae		Basal	0.97	Second	1.80			2.77

Types. Two syntypes, one male, one immature, Stewart Island, Hogg Collection, British Museum, Natural History, London.

Records. Stewart Island: Halfmoon Bay, November 21, 1946, R. R. Forster, 3 ♂, 4 ♀ (D.M.2 261, C.M.A. 180); same locality, March 10, O. Allan, 1 ♂ (D.M.2/623); same locality, June 1950, O. Allan, 1 ♂ (C.M.A. 191); Horseshoe Bay, November 20, 1948, O. Allan, 1 ♂ (C.M.A. 906); Maori Bay, November 25, 1946, R. R. Forster, 1 ♂, 1 ♀ (D.M.2 624); Raroa Reserve, October 30, 1948, R. K. Dell, 2 ♂, 4 ♀ (D.M.2/269); Bravo, November 23, 1946, R. R. Forster, 2 imm. (D.M.2/262); Stewart Island, 1913, N. Traill, 1 ♂, Otago Museum (syntype? labelled *Sorensenella Trailli* n.sp. by Hogg); South Island: Bluff, January 27, 1949, R. R. Forster, 1 imm. (C.M.A. 415).

Remarks. After examination of the type material of *trailli* in the British Museum, Roewer (1931) considered that this species was synonymous with *Soerensenella bicornis*, although it was clear from the original descriptions and figures given for both species that they differed in a number of characters, particularly the structure of the eyemound. I have re-established Hogg's species and have placed it in *Karamea*. I consider that the ocular process represents a greatly reduced form of the prominent process found in other species of this genus.

Hogg stated that the median prong of the claws 3 and 4 of his female specimen was equal in size to the lateral branches and concluded that this must constitute a dimorphic character which would therefore reduce the value of the character as one of generic importance. However, the specimen recorded as a female is, in fact, very immature and immature specimens of both *Soerensenella* and *Karamea* show the median prong more strongly developed in relation to the lateral branches than is the case in adult specimens.

Family SYNTHETONYCHIIDAE n.fam.

Eyemound absent but eyes not widely separated. Anterior margin of the carapace without spines or tubercles. Scute fused. Pedipalps elongate, slender, not armed with tubercles. Tarsal claws of legs 1 and 2, single, relatively long. Tarsal claws of legs 3 and 4 complex, with a prominent median plate and two or three main lateral branches and usually with a further pair of small accessory teeth.

Type genus *Synthetonychia* n.gen.

I consider this family to be most closely related to the *Triaenonychidae*. The basic character used to separate families of the Laniatores is the structure of the claws of legs 3 and 4. The structure of the third and fourth tarsal claws of the Synthetonychidae is basically a single claw with lateral branching, as found in both the Triaenonychidae and the Travuniidae. The lateral branches are more numerous and more strongly developed than in either of these families but the flattening and enlargement of the median prong is similar to that found in the Travuniidae. The presence of a small accessory tooth on the lateral branches is also common to both the Synthetonychiidae and Travuniidae. The absence of an eyemound has not been accompanied as in other groups (e.g. Biantidae) by the shifting of the eyes towards the lateral margins of the carapace. It is not surprising that these animals have not been recorded previously as comparatively few of the larger and more conspicuous N.Z. harvestmen were to be found in museum collections prior to the commencement of this study. Even when specifically searched for, few specimens are ever obtained. They live in moss and forest-floor debris of heavily forested areas where there is a constant high relative humidity.

Genus *SYNTHETONYCHIA* n.gen.

With the characters of the family and in addition:—Scute without tubercles but with rows of small pustules usually forming a closed pattern. Posterior margin of the scute and the free tergites smooth. Male pedipalps usually with a process on the disto-dorsal surface of the tibia and an articulated spine on the ventral surface of the tarsus. Legs without tubercles. Calcaneus shorter than astragalus. Tarsal formula 3.5.4.4. Sexual dimorphism usually evident in pedipalps and shape of the genital operculum.

Genotype *Synthetonychia oliveae* n.sp

Key to the Males of Synthetonychia

1. Tibia of pedipalp with a disto-dorsal process.. 2
   Not as above 11
2. Trochanter of the pedipalp with a strong conical dorsal process 3
   Trochanter of pedipalp smooth or with only small dorsal process tubercles 4

3. Dorsal process of trochanter almost equal in length to the trochanter; genital operculum with disto-lateral extensions .... *obtusa* n.sp.
   Dorsal process of the trochanter less than half of the length of the trochanter, anterior margin of the genital operculum without extensions .... *cornua* n.sp.
4. Genital operculum narrow anteriorly 5
   Genital operculum sub-triangular .... *oparara* n.sp.
5. Prominent rounded or sharp projection present on the ventral surface of the trochanter of the pedipalp 6
   Ventral surface of the pedipalp trochanter without prominent projections... 9
6. Disto-dorsal process of pedipalp femur digitate 7
   Disto-dorsal process of pedipalp femur somewhat flattened laterally and slightly curved distally .... *glacialis* n.sp.
7. Ventral surface of pedipalp trochanter with a rounded or sub-conical swelling. Anterior margin of genital operculum without lateral lobes 8
   Ventral surface of pedipalp trochanter with a sharp hooked process. Genital operculum with antero-lateral lobes .... *ramosa* n.sp.
8. Tarsus of pedipalp curved. Distal surface of tibial process somewhat clavate .... *oliveae* n.sp.
   Tarsus of pedipalp straight. Distal surface of tibial process evenly rounded .... *proxima* n.sp.
9. Genital operculum narrowing evenly anteriorly, with small antero-lateral lobes 10
   Genital operculum with a prominent lateral indentation at one-third of its length, disto-lateral lobes absent .... *fiordensis* n.sp.
10. Disto-dorsal tibial process of pedipalp relatively short, stout and straight; distal portion of tarsus strongly curved .... *sinuosa* n.sp.
    Disto-dorsal tibial process relatively slender and bent; tarsus not strongly curved .... *acuta* n.sp.
11. Pedipalp with tarsal spine 12
    Pedipalp without tarsal spine but with an indentation of the dorsal surface of the tarsus .... *wairarapae* n.sp.
12. Genital operculum sub-triangular, without antero-lateral lobes 13
    Genital operculum more elongate, with prominent disto-lateral lobes .... *hughsoni* n.sp.
13. Tarsus of pedipalp slender, about four times as long as it is deep...... *minuta* n.sp.
    Tarsus stout, about twice as long as it is deep .... *florae* n.sp.

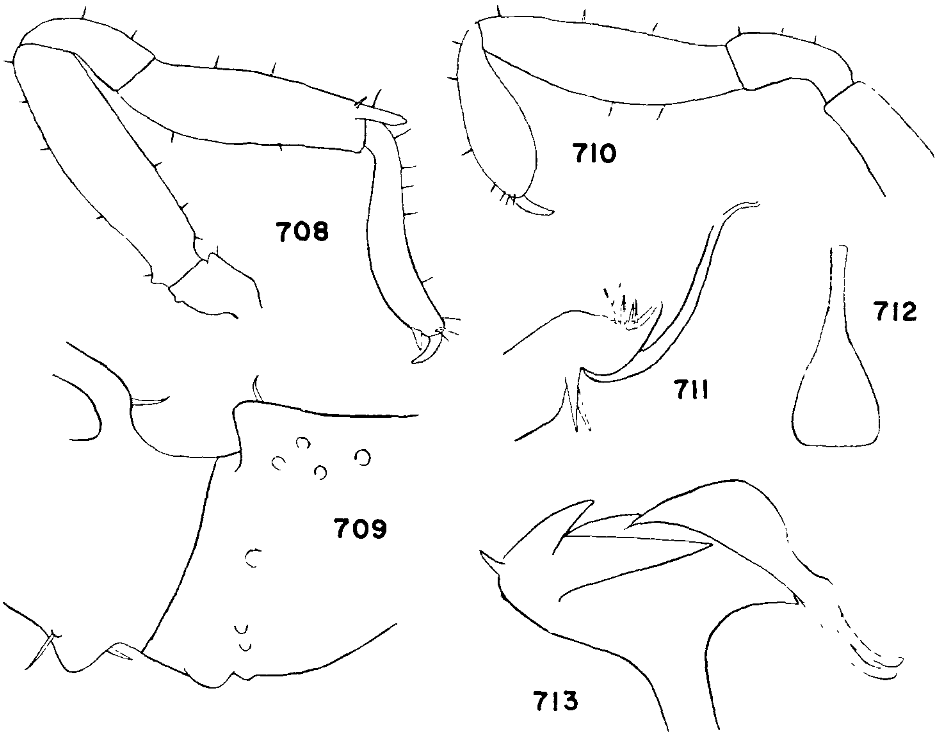
Synthetonychia oliveae n.sp.

Figs. 708-713

Male

Colour. Ground colour yellow-brown, with black shaded pattern on the dorsal surface of the scute. Chelicerae and pedipalps with black reticulate markings. Legs with alternate black and pale-brown bands.

Body. The eyes are separated from the anterior margin of the carapace by a distance which is equal to one-quarter of the total length of the scute, and are separated from each other by a distance slightly less than five times their diameter. The surface of the scute is finely and evenly granulate. Areas 1-5 are separated by shallow grooves visible on the median surface. Free tergites and the sternite are smooth.



FIGS. 708-713 *Synthetonychia oliveae* n.sp.
Fig. 708 Male pedipalp; Fig. 709 Trochanter and proximal portion of femur of male pedipalp; Fig. 710 Female pedipalp; Fig. 711 Male genitalia; Fig. 712 Genital operculum of male; Fig. 713 Tarsal claw of leg 4.

The proximal half of the genital operculum is sub-triangular but distal half narrow, terminated bluntly, without lateral lobes (Fig. 712).

Genitalia. Aedeagus long and slender, tubular, without lateral processes. Dorsal plates present, spiniform. Ventral plate present as a short and concave plate, with three setae on each lateral margin (Fig. 711).

Chelicerae. Disto-dorsal surface of the second segment distended. Second segment with low tubercles on the dorsal surface.

Pedipalps (Fig. 708). There is a small sub-conical mound on the disto-ventral surface of the trochanter and the proximo-dorsal surface of the femur and a further similar low mound on the disto-dorsal surface of the trochanter and a few small granules on the pro-lateral surface as shown in Fig. 709. The disto-dorsal process of the tibia is well-developed and digitiform. Tarsus slender, slightly sinuous, disto-ventral spine short, equal to half the length of the tarsal claw.

Legs. Smooth. Tarsal formula 3.5.4.4. The tarsal claws of legs 3 and 4 are as shown in Fig. 713; the arolium extends well beyond the median branch, anterior portion with median incision.

Measurements

		Scute	Length	1.68	Width	1.40		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.56	0.24	1.08	0.37	0.71	0.90	0.52	4.38
Leg 2 ..	0.72	0.27	1.46	0.47	1.15	1.24	0.81	6.12
Leg 3 ..	0.58	0.25	1.12	0.39	0.88	1.08	0.58	4.88
Leg 4 ..	0.72	0.32	1.32	0.50	1.15	1.44	0.64	6.09
Pedipalp ..		0.28	1.24	0.50	1.08		0.92	4.02
Chelicera ..		Basal	0.33	Second	0.68			1.01

Female. Genital operculum almost twice as wide as it is long. Pedipalps as shown in Fig. 710, tarsus relatively shorter than male and stout.

Measurements

		Scute	Length	1.56	Width	1.50		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.56	0.25	0.96	0.36	0.68	0.84	0.48	4.13
Leg 2 ..	0.80	0.28	1.36	0.48	1.04	1.08	0.72	5.78
Leg 3 ..	0.56	0.28	1.04	0.44	0.88	1.07	0.58	4.85
Leg 4 ..	0.72	0.32	1.28	0.52	1.08	1.44	0.60	5.96
Pedipalp ..		0.28	1.32	0.52	1.08		0.76	3.96
Chelicera ..		Basal	0.32	Second	0.64			0.96

Types. Holotype male, Halfmoon Bay, Stewart Island, March 10, 1949, O. Allan (C.M.A. 885); Allotype female, same data (C.M.A. 886); Paratypes: same data, 1 ♂ (C.M.A. 887); Garden Mound, Stewart Island, 2 ♂, 3 ♀ (C.M.A. 922, D.M.2 923).

Remarks. This species is named for the late Miss Olive Allan who did much towards providing a better knowledge of the interesting fauna of Stewart Island.

Synthetonychia acuta n.sp.

Figs. 714-719

Male

Colour. Reddish-brown.

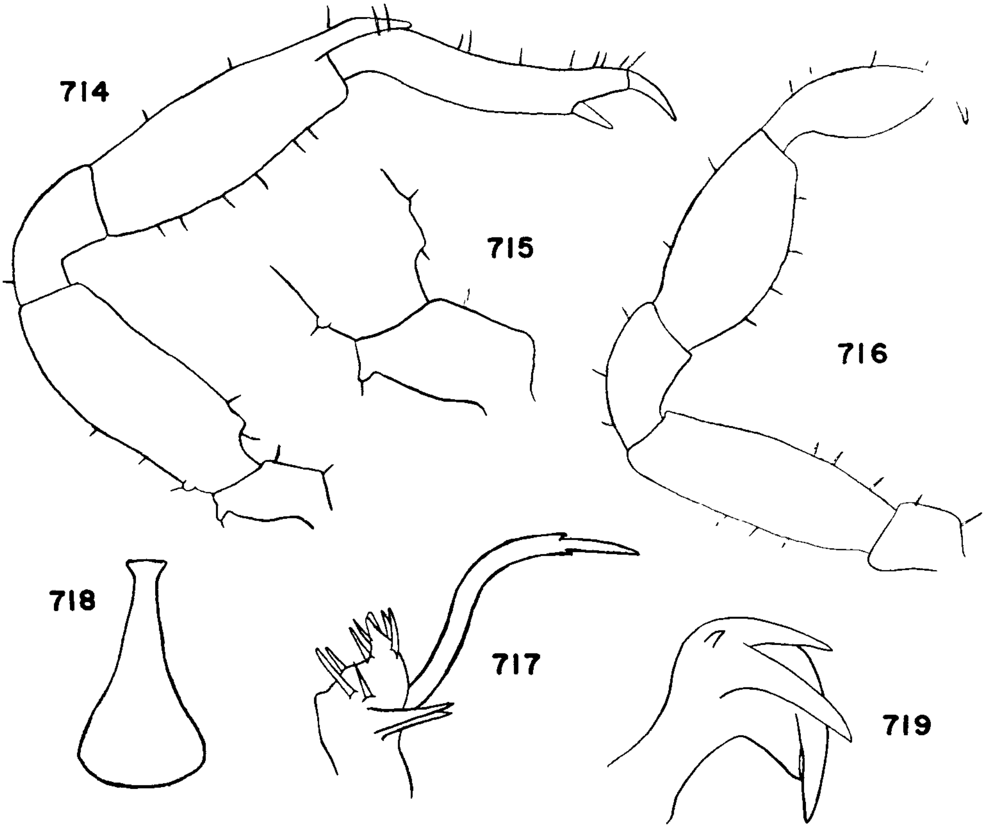
Body. The eyes are separated from the anterior margin of the carapace by a distance equal to five-twelfths of the total length of the scute, separated from each other by a distance equal to one and a half times their diameter. The carapace is finely and closely granulate; tergal region with a pattern of single rows of granules. The shape of the genital operculum is shown in Fig. 718, almost twice as long as it is wide at the base.

Genitalia. Aedeagus flattened dorso-ventrally, long, uniformly narrow, with two small lateral spines at three-quarters of its length. Dorsal plates present as two strong spines. Ventral plate divided, each half with eight setae (Fig. 717).

Chelicerae. Typical.

Pedipalps (Fig. 714). Trochanter with a small tubercle on the disto-dorsal surface as shown in Fig. 715. There is a smaller, more rounded tubercle on the proximo-dorsal surface of the femur and a small mound on the proximo-ventral surface. The disto-dorsal process of the tibia is strong, sharply pointed, and bent. The tarsus is slender and slightly sinuous. Tarsal spine strong, equal in length to two-thirds of the length of the tarsal claw.

Legs. Few small tubercles on femora. Tarsal formula 3.5.4.4. Tarsal claws 3 and 4



FIGS. 714-719 *Synthetonychia acuta* n.sp.

Fig. 714 Male pedipalp; Fig. 715 Trochanter and proximal portion of femur of male pedipalp; Fig. 716 Female pedipalp; Fig. 717 Male genitalia; Fig. 718 Genital operculum of male; Fig. 719 Tarsal claw leg 4.

as shown in Fig. 719, with arolium extending well beyond the median branch, two lateral branches and a small accessory tooth.

Measurements

Scute Length 1.60 Width 1.24

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.40	0.20	0.84	0.32	0.57	0.80	0.48	3.61
Leg 2 ..	0.48	0.24	1.20	0.48	1.00	1.08	0.72	5.20
Leg 3 ..	0.36	0.24	0.96	0.36	0.80	1.02	0.52	4.26
Leg 4 ..	0.44	0.28	1.20	0.48	1.00	1.35	0.60	5.35
Pedipalp ..		0.24	0.81	0.32	0.80		0.88	3.05
Chelicera ..		Basal	0.32	Second	0.54			0.86

Female. Similar in general structure to male. The genital operculum is slightly wider than long. The pedipalps are as shown in Fig. 716. The tibia and tarsus are relatively stouter than in male, tibial process and tarsal spine absent.

Measurements

Scute Length 1.60 Width 1.44

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.40	0.21	0.72	0.32	0.48	0.60	0.44	3.17
Leg 2 ..	0.52	0.24	0.96	0.44	0.76	0.80	0.60	4.32
Leg 3 ..	0.40	0.24	0.84	0.36	0.68	0.76	0.44	3.72
Leg 4 ..	0.48	0.28	1.00	0.44	0.80	0.94	0.72	4.66
Pedipalps ..		0.24	0.84	0.36	0.64		0.48	2.56
Chelicera ..		Basal	0.28	Second	0.56			0.84

Types. Holotype male, Flora Hut, Mount Arthur Tableland, January 28, 1948, R. K. Dell (D.M.2/888); Allotype female, Mount Balloon, Mount Arthur Tableland, January 26, 1948, R. K. Dell (D.M.2/889); Paratypes: same data as holotype, 1 ♀, 1 imm. (D.M.2/890); Mount Balloon, January 26, 1948, R. R. Forster, 2 ♂ (C.M.A. 884); Flora Saddle, 3,200 feet, January 23, 1946. J. T. Salmon, 1 ♂ (D.M.2/891).

Records. Cawthron Park, Upper Maitai Valley, Nelson, October 17, 1946, E. S. Gourlay, 1 ♂ (D.M.2/892).

Synthetonychia cornua n.sp.

Figs. 720-725

Male

Colour. Reddish-brown.

Body. Carapace finely granulate, tergal region with the normal pattern. The eyes are separated from the anterior margin of the carapace by a distance equal to three-tenths of the length of the scute, and separated from each other by a distance equal to twice their diameter. The shape of the genital operculum is shown in Fig. 724, without antero-lateral lobes, wider at base than it is long in ratio of 7:4.

Genitalia. Aedeagus slender, spear-like, with a long, slender spine on the ventral surface at about one-third as shown in Fig. 723. Ventral plate short and broad, with six setae.

Chelicerae. Typical.

Pedipalps (Fig. 720). Trochanter with a rounded tubercle on the disto-ventral surface and a stronger, more conical, process on the dorsal surface as shown in Fig. 721. There is a small tubercle on the proximo-dorsal surface of the femur. The disto-dorsal process of the tibia is strong, sharply pointed. The tarsus is slender, almost straight, spine short and stout, equal to half length of tarsal claw.

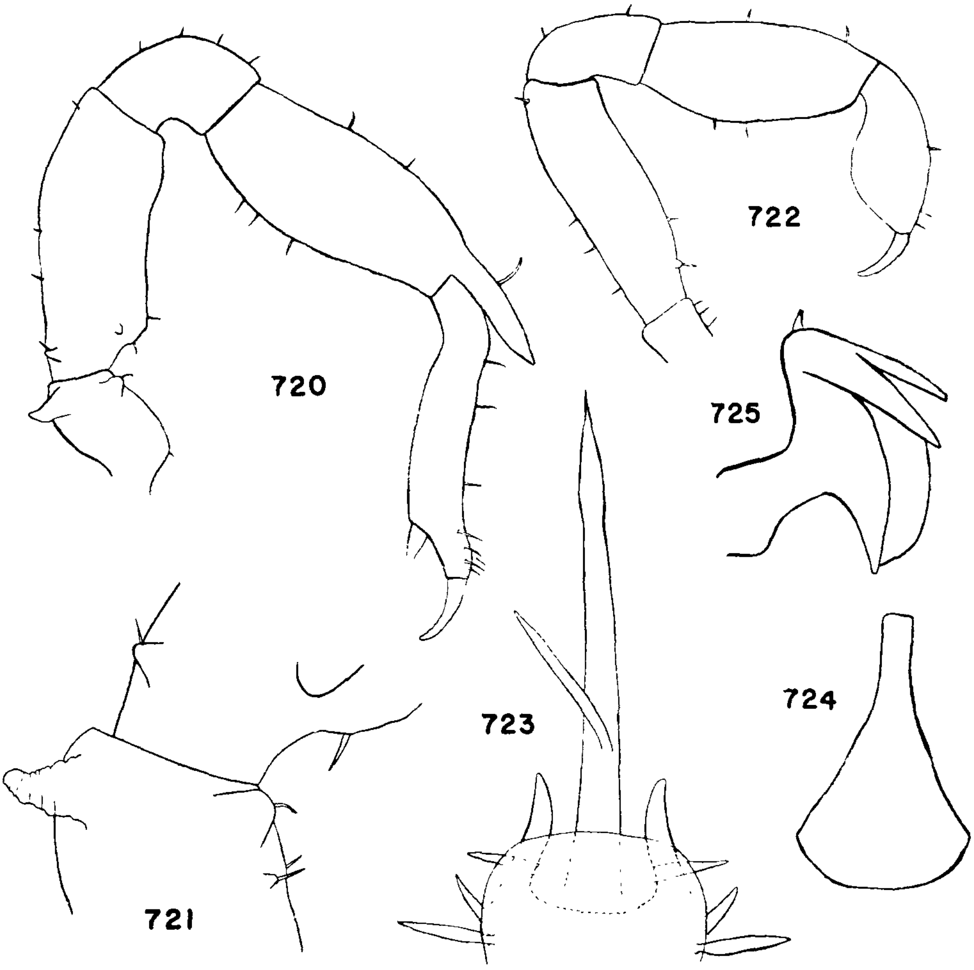
Legs. Smooth apart from a few small scattered tubercles. Tarsal formula 3.5.4.4. Tarsal claws of legs 3 and 4 as shown in Fig. 725, arolium not extending beyond the median branch.

Measurements

Scute Length 1.20 Width 1.12

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.48	0.22	0.80	0.36	0.49	0.63	0.44	3.42
Leg 2 ..	0.60	0.21	1.10	0.48	0.72	0.83	0.60	4.54
Leg 3 ..	0.44	0.21	0.84	0.36	0.64	0.73	0.49	3.71
Leg 4 ..	0.48	0.23	0.97	0.41	0.80	0.96	0.48	4.33
Pedipalp ..		0.28	0.72	0.24	0.67		0.68	2.59
Chelicera ..		Basal	0.19	Second	0.56			0.75

Female. Similar in structure to male. Genital operculum wider than long in ratio



FIGS. 720-725 *Synthetonychia cornua* n.sp.
Fig. 720 Male pedipalp; Fig. 721 Coxa and proximal portion of femur of male pedipalp; Fig. 722 Female pedipalp; Fig. 723 Male genitalia; Fig. 724 Genital operculum of male; Fig. 725 Tarsal claw of leg 4.

of 6:5. Pedipalp as shown in Fig. 722, trochanter and tibia without processes, tarsus short and stout.

Measurements

		Scute	Length	1.32	Width	1.10		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.40	0.19	0.60	0.28	0.36	0.44	0.34	2.61
Leg 2 ..	0.53	0.20	0.74	0.39	0.56	0.60	0.49	3.51
Leg 3 ..	0.43	0.20	0.64	0.33	0.52	0.60	0.44	3.16
Leg 4 ..	0.48	0.24	0.82	0.40	0.64	0.75	0.44	3.77
Pedipalp ..		0.20	0.65	0.24	0.53		0.36	1.98
Chelicera ..		Basal	0.18	Second	0.41			0.59

Types. Holotype male, Stillwater Base, Caswell Sound, April 14, 1949, R. R. Forster (C.M.A. 893); Allotype female, same data (C.M.A. 894); Paratypes: Stillwater

Base, March 13, 1949, R. K. Dell, 1 ♂ (D.M.2/903); Caswell Sound, March 27, 1949, R. K. Dell, 1 ♂ (D.M.2/902).

Records. South Bank, Haast River, December 31, 1951, I. Wheeler, 1 ♂ (C.M.A. 900); Ferguson's Bush, near Hokitika, December 9, 1949, R. R. Forster, 1 ♂, 1 ♀ (C.M.A. 899).

Synthetonychia fiordensis n.sp.

Figs. 726-729

Male

Colour. Yellowish-brown, shaded with black. Chelicerae and pedipalps with black reticulate markings.

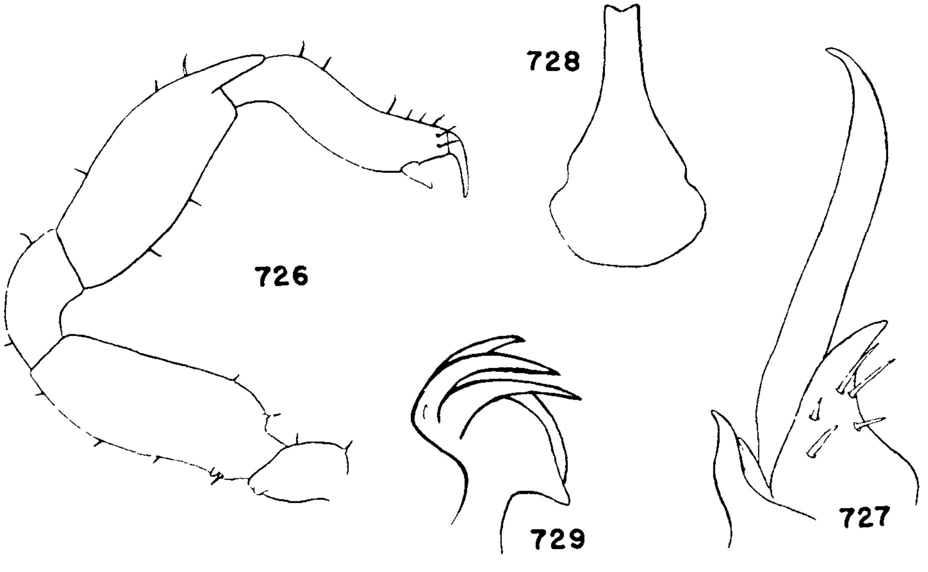
Body. The scute and free tergites are finely granulate. There is a pattern of small pustules on the scute. The eyes are separated from the anterior margin of the carapace by a distance equal to four-elevenths of the length of the scute, separated from each other by a distance equal to twice their width. The shape of the genital operculum is shown in Fig. 728, longer than it is wide in the ratio of 5:3, anterior margin indented but without lateral lobes.

Genitalia. As shown in Fig. 727. Aedeagus stout. Ventral plate armed on each side with five setae of which the more lateral seta is the smaller.

Chelicerae. Typical.

Pedipalps (Fig. 726). The dorsal surface of the trochanter with a small distal process. The tarsus is stout and strongly curved, tarsal spine stout, equal to half of the length of the tarsal claw.

Legs. Tarsal formula 3.5.4.4. Tarsal claws as shown in Fig. 729. The arolium does not extend beyond the median branch.



FIGS. 726-729 *Synthetonychia fiordensis* n.sp.

Fig. 726 Male pedipalp; Fig. 727 Male genitalia; Fig. 728 Genital operculum of male; Fig. 729 Tarsal claw of leg 4.

Measurements

Scute Length 1.28 Width 1.08

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.40	0.16	0.67	0.16	0.41	0.44	0.32	2.56
Leg 2 ..	0.52	0.16	0.80	0.40	0.59	0.68	0.49	3.64
Leg 3 ..	0.44	0.17	0.68	0.28	0.52	0.64	0.36	3.09
Leg 4 ..	0.56	0.24	0.84	0.40	0.72	0.80	0.48	4.04
Pedipalp ..		0.20	0.64	0.28	0.57		0.54	2.23
Chelicera ..		Basal	0.32	Second	0.48			0.80

Types. Holotype male, Caswell Sound, April 18, 1949, R. R. Forster (C.M.A. 891); Paratypes: Same data ,1 ♂ (C.M.A. 892); same locality, March 27, 1949, R. K. Dell, 1 ♂ (D.M.2/901).

Synthetonychia sinuosa n.sp.

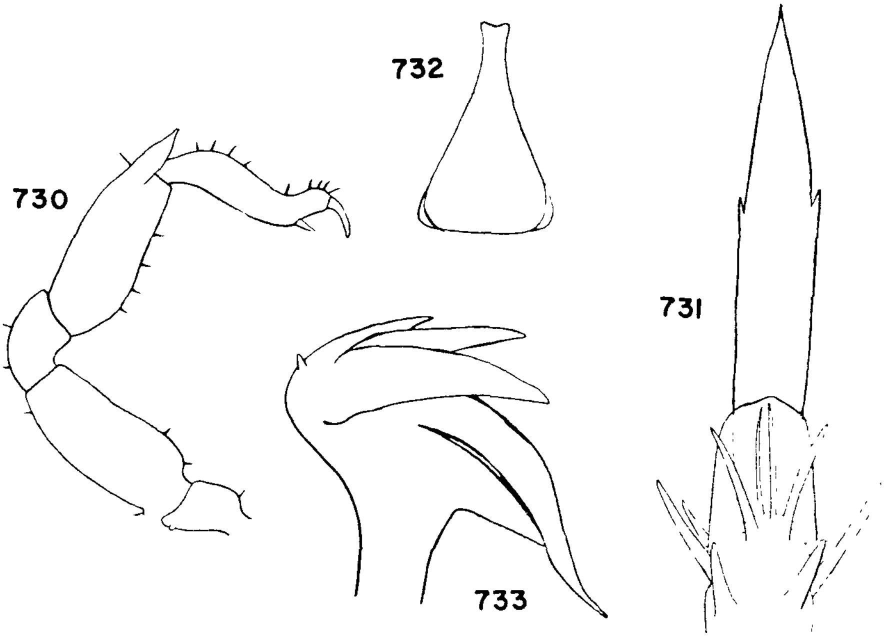
Figs. 730-733

Male

Colour. Reddish-brown.

Body. The scute is finely and uniformly granulate. The eyes are separated from the anterior margin of the carapace by a distance equal to one-third of the length of the scute, separated from each other by a distance equal to three times their diameter. The genital operculum is of the shape shown in Fig. 732 with small antero-lateral lobes, twice as long as it is wide at the base.

Genitalia. The aedeagus is flattened dorso-ventrally, with two small lateral spines at about two thirds of its length and terminated sharply. (Fig. 731). There are 10 setae near the base of the aedeagus.



Figs. 730-733 *Synthetonychia sinuosa* n.sp.
Fig. 730 Male pedipalp; Fig. 731 Male genitalia; Fig. 732 Genital operculum of male; Fig. 733 Tarsal claw of leg 4.

Chelicerae. Normal.

Pedipalps (Fig. 730). There is a small rounded tubercle on the disto-dorsal surface of the trochanter and another on the proximo-dorsal surface of the femur. Tibia with a strong, sharply pointed disto-dorsal process. Tarsus slender, strongly sinuous, spine short, less than half the length of tarsal claw.

Legs. Smooth apart from a few small setose tubercles on femora. Tarsal formula 3.5.4.4. Tarsal claws 3 and 4 as shown in Fig. 733, arolium slender, spinous, extending well beyond median branch.

Measurements

		Scute	Length	1.68	Width	1.36		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.34	0.26	0.84	0.36	0.53	0.68	0.43	3.44
Leg 2 ..	0.48	0.25	1.04	0.48	0.80	0.85	0.65	4.55
Leg 3 ..	0.44	0.24	0.84	0.40	0.64	0.80	0.52	3.68
Leg 4 ..	0.60	0.28	1.04	0.48	0.84	1.04	0.56	4.84
Pedipalp ..		0.28	0.72	0.32	0.64		0.76	2.72
Chelicera ..		Basal	0.36	Second	0.64			1.00

Types. Holotype male, Franz Josef, Westland, April 26, 1951, R. R. Forster (C.M.A. 903), Paratypes: 1 ♂, same data as holotype (C.M.A. 904).

Records. Okarito, Westland, April 26, 1951, R. R. Forster, 2 ♂ (C.M.A. 901).

Synthetonychia proxima n.sp.

Figs. 734-738

Male

Colour. Reddish-brown.

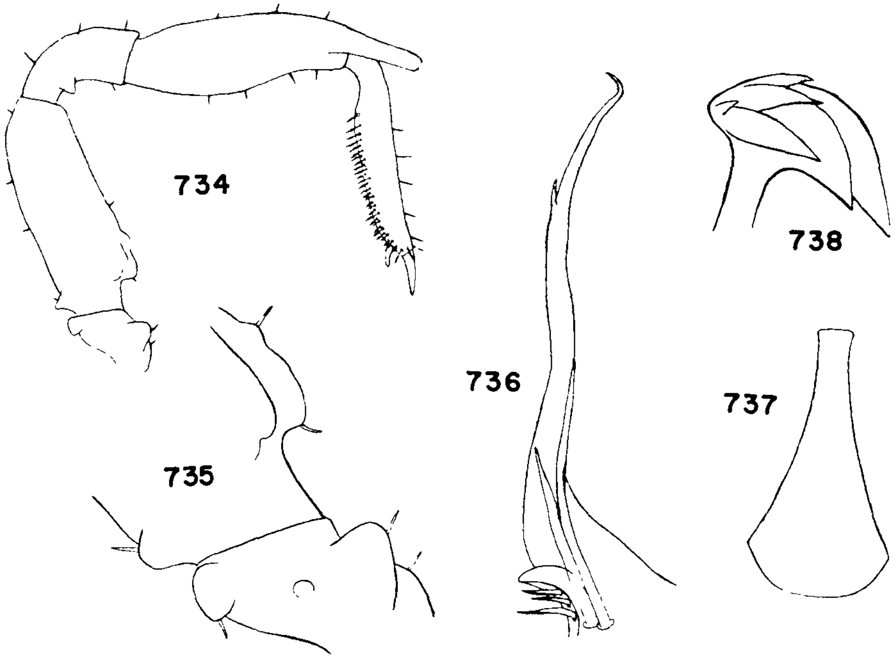
Body. Carapace finely and closely granulate, tergal region with pattern formed by lines of granules. The eyes are separated from the anterior margin of the carapace by a distance equal to one-quarter of the length of the scute, separated from each other by a distance equal to three times their diameter. The shape of the genital operculum is shown in Fig. 737, twice as long as wide at the base.

Genitalia. Aedeagus long, slender, tubular, with a short ventral spine at about three-quarters of its length. There are two long and slender setae on each lateral margin at the base, the dorsal seta being longer (Fig. 736). There are three smaller setae on the ventral surface.

Chelicerae. Typical.

Pedipalps (Fig. 734). There are strong protuberances on both the dorsal and ventral surfaces of the trochanter as shown in Fig. 735, and on the proximo-dorsal and sub-proximo-ventral surfaces of the femur. Patella with a conical mound on the ventral surface. The disto-dorsal process of the tibia is digitiform, blunt apically. The tarsus is slender and straight. Tarsal spine short, less than half the length of the tarsal claw.

Legs. Smooth apart from a few low tubercles on the femora. Tarsal formula 3.5.4.4. Tarsal claws 3 and 4 as shown in Fig. 738, lateral branches relatively small, arolium extending beyond the median branch.



FIGS. 734-738 *Synthetonychia proxima* n.sp.

Fig. 734 Male pedipalp; Fig. 735 Trochanter and proximal portion of femur of male pedipalp; Fig. 736 Male genitalia; Fig. 737 Genital operculum of male; Fig. 738 Tarsal claw of leg 4.

Measurements

		Scute	Length	0.96	Width	0.84		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.32	0.12	0.51	0.27	0.36	0.40	0.28	2.26
Leg 2 ..	0.48	0.14	0.68	0.32	0.49	0.48	0.44	3.03
Leg 3 ..	0.36	0.16	0.56	0.25	0.44	0.48	0.32	2.57
Leg 4 ..	0.40	0.17	0.72	0.32	0.56	0.68	0.36	3.21
Pedipalp ..		0.16	0.56	0.24	0.48		0.51	1.95
Chelicera ..		Basal	0.17	Second	0.44			0.61

Type. Holotype male, Ships Cove, Queen Charlotte Sounds, Marlborough, September 12, 1948, J. T. Salmon (D.M.2/884).

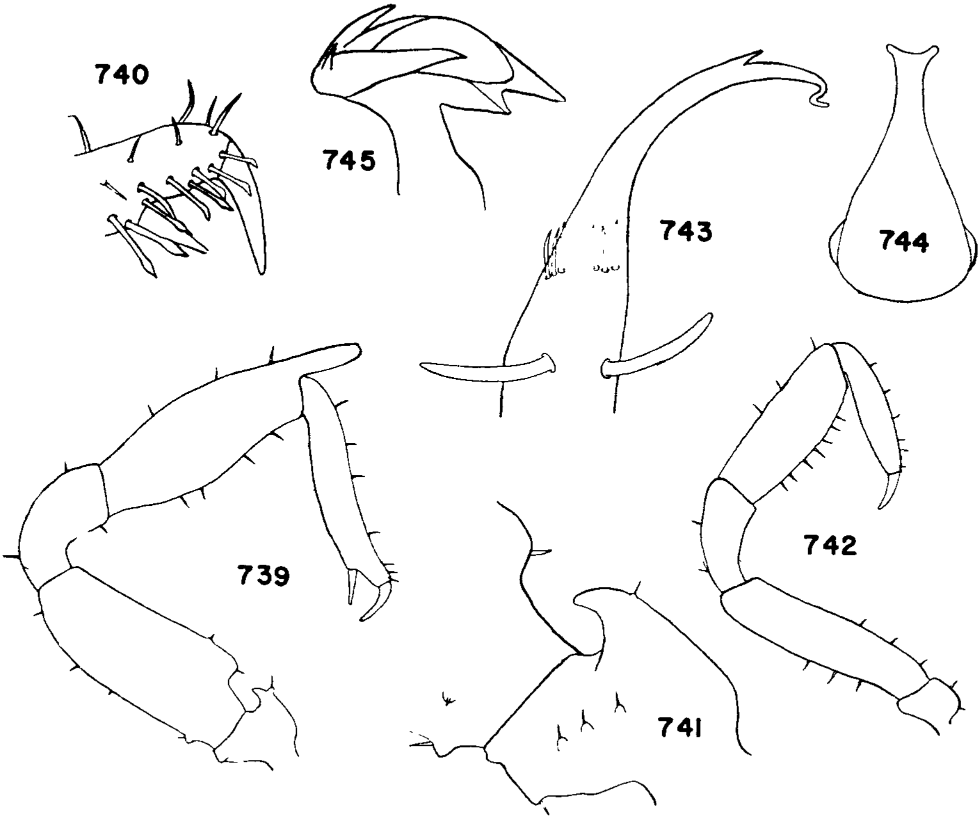
Synthetonychia ramosa n.sp.

Figs. 739-745

Male

Colour. Pale brown with black shading.

Body. The carapace is closely and finely granulate, the tergal region is shiny with a series of single rows of similar granules which form a definite pattern. The free tergites and the sternites are smooth. The eyes are separated from the anterior margin of the carapace by a distance equal to two-fifths of the total length of the scute, separated from each other by a distance equal to two and a half times their diameter. The genital operculum is as shown in Fig. 744, the width at the base is



FIGS. 739-745 *Synthetonychia ramosa* n.sp.

Fig. 739 Male pedipalp; Fig. 740 Distal portion of tarsus of male pedipalp; Fig. 741 Trochanter and proximal portion of the femur of male pedipalp; Fig. 742 Female pedipalp; Fig. 743 Male genitalia; Fig. 744 Genital operculum of male; Fig. 745 Tarsal claw of leg 4.

equal to one-half of its length, anterior margin indented and with prominent lateral lobes.

Genitalia. Tubular, narrowing anteriorly, with two prominent spines on the proximo-ventral surface. There is a transverse row os six setae on the dorsal surface at about one-third, which are arranged in two groups of three (Fig. 743).

Chelicerae. Typical.

Pedipalps (Fig. 739). There is a strong hooked process on the disto-ventral surface of the trochanter as shown in Fig. 741, a transverse row of three low rounded tubercles on the retro-ventral surface and a similar single tubercle on the dorsal surface. Femur with a prominent lobe on the proximo-ventral surface and a small conical tubercle on the proximo-dorsal surface. The disto-dorsal process of the tibia is strong and digitiform. The tarsus is slender and almost straight. Tarsal spine slender, two-thirds of length of tarsal claw.

Legs. Smooth, apart from few low tubercles on femora 1 and 2. Tarsal formula 3.5.4.4. Tarsal claws 3 and 4 as shown in Fig. 745.

Measurements

	Cox.	Scute Troch.	Length Fem.	1.17 Pat.	Width Tib.	0.96 Met.	Tars.	Total
Leg 1 ..	0.38	0.20	0.52	0.28	0.36	0.36	0.35	2.45
Leg 2 ..	0.50	0.20	0.70	0.36	0.52	0.53	0.41	3.22
Leg 3 ..	0.39	0.16	0.56	0.29	0.45	0.48	0.35	2.68
Leg 4 ..	0.48	0.23	0.72	0.33	0.60	0.68	0.36	3.40
Pedipalp ..		0.16	0.60	0.23	0.54		0.54	2.07
Chelicera ..		Basal	0.16	Second	0.44			0.60

Female. Similar in general structure to male. The pedipalps are as shown in Fig. 742. The genital operculum is wider than long in ratio of 5:4.

Measurements

	Cox.	Scute Troch.	Length Fem.	1.32 Pat.	Width Tib.	1.20 Met.	Tars.	Total
Leg 1 ..	0.24	0.16	0.54	0.24	0.35	0.40	0.37	2.30
Leg 2 ..	0.44	0.19	0.75	0.31	0.51	0.56	0.52	3.28
Leg 3 ..	0.40	0.16	0.60	0.27	0.44	0.55	0.41	2.83
Leg 4 ..	0.48	0.21	0.72	0.32	0.64	0.80	0.56	3.73
Pedipalp ..		0.16	0.68	0.30	0.54		0.40	2.08
Chelicera ..		Basal	0.16	Second	0.41			0.57

Types. Holotype male, Blue Mountains, Silverstream, Wellington, April 18, 1948, J. T. Salmon (D.M.2/893); Allotype female, Stokes Valley, Wellington, January 10, 1948, R. R. Forster (D.M.2/894); Paratypes: 1 ♀, same data as holotype (C.M.A. 888); 1 ♂, same data as allotype (C.M.A. 894); Kapiti Island, May 7, 1947, R. R. Forster, 1 ♀ (D.M.2/895).

Records. Mount Ross, South Wairarapa, April 5, 1947, R. R. Forster, 1 ♂ (D.M.2/896).

Synthetonychia glacialis n.sp.

Figs. 746-750

Male

Colour. Reddish-brown.

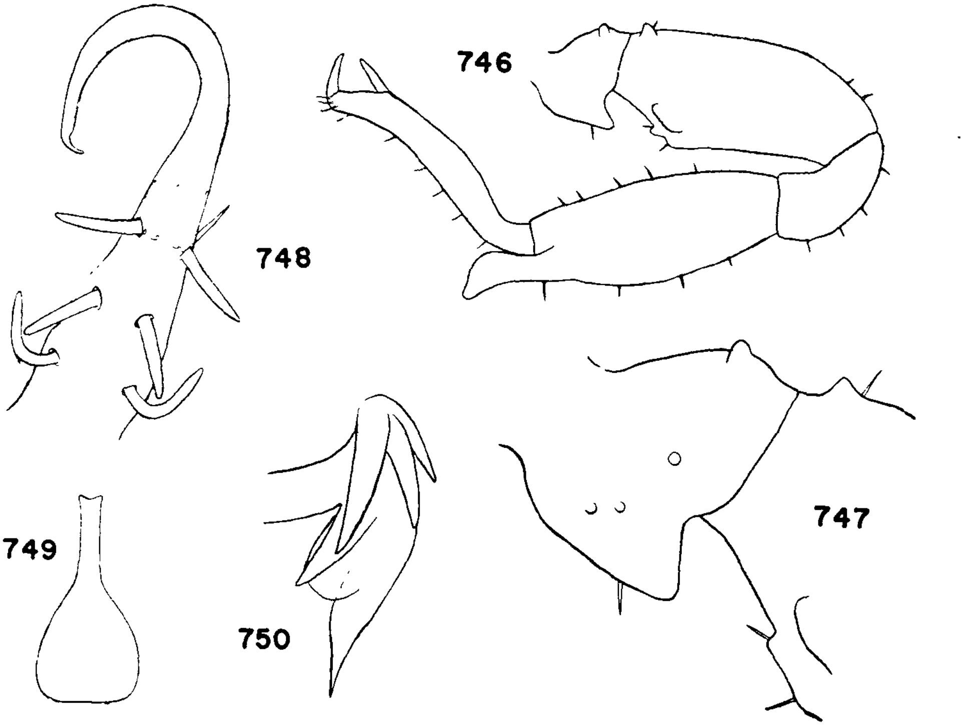
Body. Carapace evenly granulate, tergal region with rows of small granules forming a distinct pattern. The eyes are separated from the anterior margin of the carapace by a distance equal to two-fifths of the length of the scute, separated from each other by a distance equal to four times their diameter. Genital plate as shown in Fig. 749, similar in shape to *oliveae*, twice as long as it is wide at the base, with small disto-lateral lobes.

Genitalia. Tubular, narrowing distally, ventral surface, with three pairs of strong spines, proximal pair curved. There are four small setae present on the dorsal surface above the distal pair of spines (Fig. 748). Dorsal and ventral plates absent.

Chelicerae. Typical.

Pedipalps (Fig. 746). The trochanter and tibia are similar in structure to *obtusa* but the disto-ventral process of the trochanter is more evenly conical (Fig. 747). The disto-dorsal process of the tibia is somewhat flattened laterally and distended on the ventral surface. Tarsus slender, tarsal spine equal in length with tarsal claw.

Legs. Similar in structure to *obtusa*. Tarsal formula 3.5.4.4. Tarsal claws of legs 3 and 4 as shown in Fig. 750, arolium strongly developed, sharply terminated.



FIGS. 746-750 *Synthetonychia glacialis* n.sp.
Fig. 746 Male pedipalp; Fig. 747 Trochanter and proximal portion of femur of male pedipalp; Fig. 748 Male genitalia; Fig. 749 Genital operculum of male; Fig. 750 Tarsal claw of leg 4.

Measurements

		Scute	Length	1.52	Width	0.96		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1	0.33	0.12	0.52	0.28	0.36	0.28	0.12	2.01
Leg 2	0.48	0.20	0.72	0.36	0.53	0.47	0.48	3.24
Leg 3	0.38	0.19	0.56	0.28	0.44	0.52	0.36	2.73
Leg 4	0.60	0.20	0.80	0.36	0.64	0.64	0.36	3.60
Pedipalp		0.19	0.60	0.24	0.56		0.57	2.16
Chelicera		Basal	0.19	Second	0.45			0.64

Type. Holotype male, Franz Josef, Westland, April 26, 1951, R. R. Forster (C.M.A. 905).

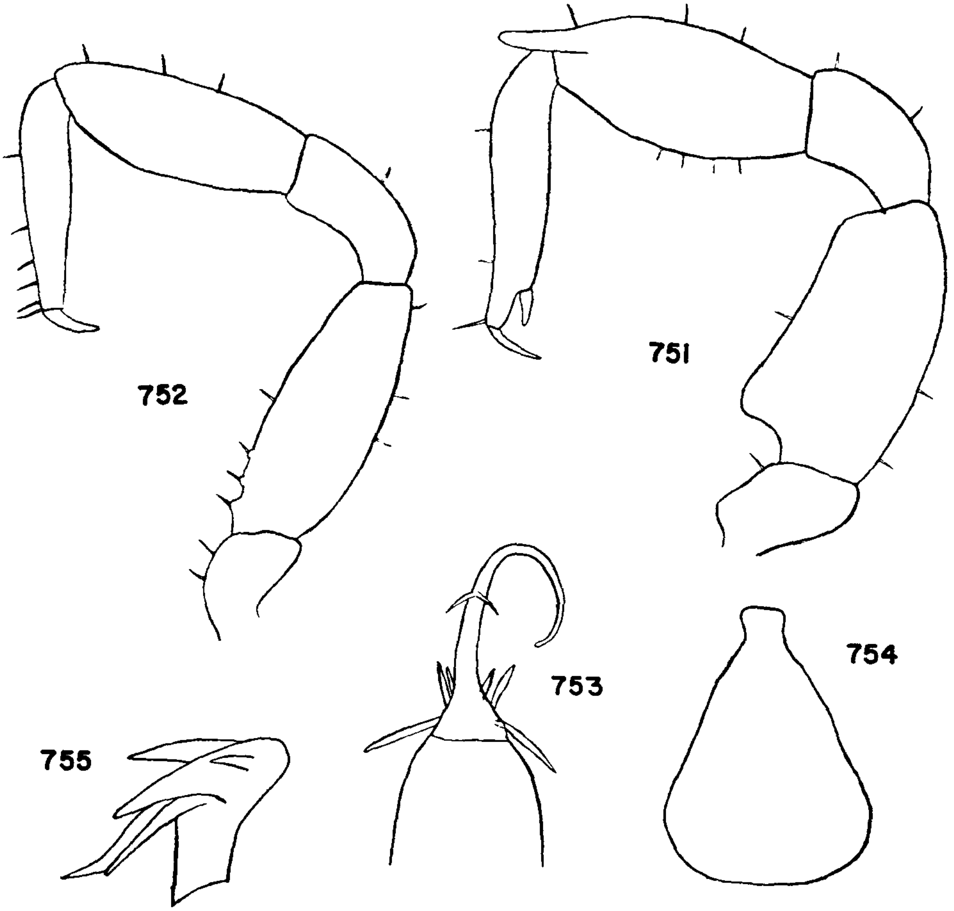
Synthetonychia oparara n.sp.

Figs. 751-755

Male

Colour. Reddish-brown.

Body. The carapace is finely granulate, tergal region with a typical pattern. The eyes are separated from the anterior margin of the carapace by a distance equal to one-third of the length of the scute, separated from each other by a distance equal to twice their diameter. The shape of the genital operculum is shown in Fig. 754, sub-triangular, only slightly longer than wide.



FIGS. 751-755 *Synthetonychia oparara* n.sp.
Fig. 751 Male pedipalp; Fig. 752 Female pedipalp; Fig. 753 Male genitalia; Fig. 754 Genital operculum of male; Fig. 755 Tarsal claw of leg 4.

Genitalia. The aedeagus is slender and tubular, with a pair of small spines at the mid-ventral surface. Six setae present at the base of the aedeagus as shown in Fig. 753. Dorsal and ventral plates absent.

Chelicerae. Typical.

Pedipalps (Fig. 751). There is a prominent swelling on the ventral surface of the trochanter and the proximo-ventral surface of the femur. The disto-dorsal process of the tibia is strong, digitiform. The tarsus is slender and straight, tarsal spine small, stout, equal to half length of tarsal claw.

Legs. Few small tubercles on femora, legs otherwise smooth. Tarsal formula 3.5.4.4. Tarsal claws 3 and 4 as shown in Fig. 755, only four lateral branches, accessory spine present, arolium extending beyond median branch.

Measurements

		Scute	Length	1.00	Width	1.00		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.25	0.12	0.53	0.28	0.33	0.38	0.28	2.17
Leg 2 ..	0.28	0.16	0.70	0.35	0.45	0.45	0.40,	2.79
Leg 3 ..	0.30	0.15	0.60	0.28	0.40	0.43	0.38	2.54
Leg 4 ..	0.41	0.20	0.65	0.38	0.58	0.63	0.30	3.15
Pedipalp ..		0.22	0.33	0.25	0.50		0.50	1.80
Chelicera ..		Basal	0.18	Second	0.28			0.46

Female. Similar in structure to male except in a few characters. The genital operculum is wider than it is long. The pedipalp is as shown in Fig. 752, three small tubercles on the proximo-ventral surface of the femur, lacking tibial process and tarsal spine.

Measurements

		Scute	Length	1.25	Width	1.13		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.25	0.18	0.50	0.28	0.35	0.53	0.30	2.39
Leg 2 ..	0.33	0.19	0.67	0.35	0.47	0.38	0.38	2.77
Leg 3 ..	0.35	0.12	0.53	0.30	0.43	0.45	0.33	2.51
Leg 4 ..	0.40	0.19	0.73	0.35	0.55	0.63	0.34	3.19
Pedipalp ..		0.20	0.55	0.35	0.51		0.48	2.09
Chelicera ..		Basal	0.17	Second	0.30			0.47

Types. Holotype male, Oparara, Karamea, January 18, 1950, R. R. Forster (C.M.A. 907). Allotype female, same data (C.M.A. 908).

Synthetonychia obtusa n.sp.

Figs. 756-760

Male

Colour. Yellowish-brown with faint black shading.

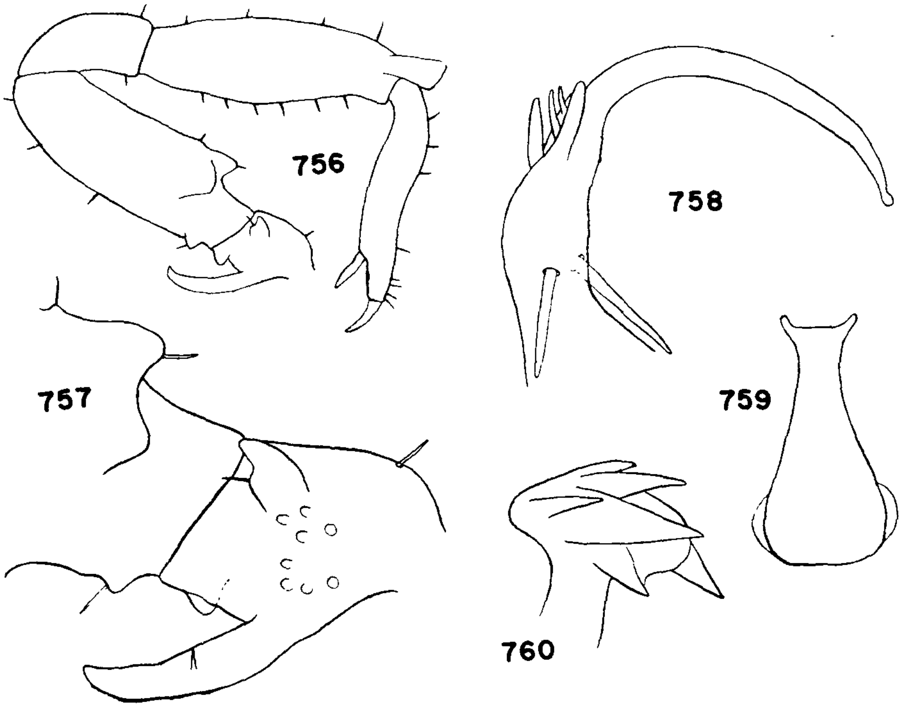
Body. Scute finely granulate. The eyes are separated from the anterior margin by a distance which is equal to two-fifths of the total length of the scute, separated from each other by a distance equal to twice their diameter. Genital operculum narrowing postero-anteriorly but widening distally to form a pair of disto-lateral lobes, width at base equal to one-half of length (Fig. 759).

Genitalia (Fig. 758). Aedeagus long and tubular, with two strong spines rising from sockets on the ventral surface near the base and a further two spinous processes on the dorsal surface at about one-third followed by two strong setae. Dorsal and ventral plates absent.

Chelicerae. Typical.

Pedipalps (Fig. 756). The trochanter is provided with a strong horn-like process on the mid-dorsal surface which is equal in length to the trochanter and with two smaller processes, one disto-dorsal in position, and one on the distal retro-lateral surface (Fig. 757). There is a strong lobe on the ventral surface of the femur at one-fifth of its length which extends to the retro-lateral surface, and a small conical tubercle on the proximo-dorsal surface. The disto-dorsal process of the tibia is well developed, becoming wider anteriorly where it is terminated abruptly. The tarsal segment is slender and slightly sinuous, tarsal spine strong, equal in length to the tarsal claw.

Legs. Smooth, apart from a few small setose tubercles on the femora. Tarsal formula 3.5.4.4. Tarsal claws of legs 3 and 4 as shown in Fig. 760, median branch short, arolium strongly developed.



FIGS. 756-760 *Synthetonychia obtusa* n.sp.
Fig. 756 Male pedipalp; Fig. 757 Trochanter and proximal portion of femur of male pedipalp; Fig. 758 Male genitalia; Fig. 759 Genital operculum of male; Fig. 760 Tarsal claw of leg 4.

Measurements

		Scute	Length	1.28	Width	1.20		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.32	0.14	0.59	0.28	0.40	0.48	0.36	2.57
Leg 2 ..	0.40	0.19	0.80	0.36	0.61	0.60	0.56	3.52
Leg 3 ..	0.32	0.16	0.60	0.24	0.44	0.60	0.36	2.72
Leg 4 ..	0.48	0.17	0.85	0.34	0.64	0.80	0.44	3.72
Pedipalp ..		0.19	0.64	0.30	0.60		0.52	2.25
Chelicera ..		Basal	0.22	Second	0.52			0.74

Type. Holotype male, Grove Track, near Picton, Marlborough, January 28, 1947, A. J. Healy (D.M.2/883).

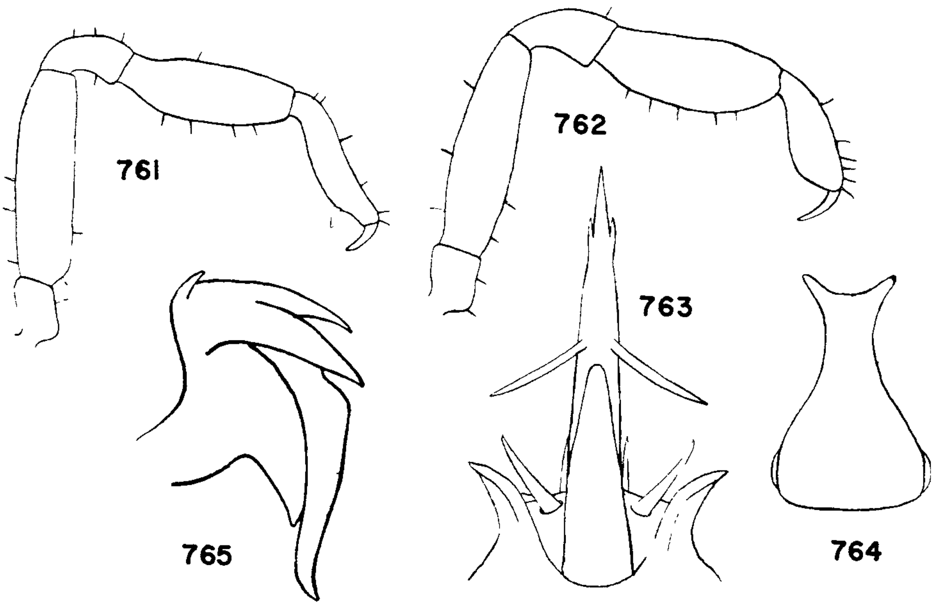
Synthetonychia hughsoni n.sp.

Figs. 761-765

Male

Colour. Reddish-brown with black shading.

Body. Scute similar to *glacialis*. The eyes are separated from the anterior margin of the carapace by a distance equal to one-third of the total length of the scute, separated from each other by a distance equal to five times the diameter of the eyes. The shape of the genital operculum is as shown in Fig. 764, with prominent lateral lobes on the anterior margin. The width at the base is equal to three-quarters of the length.



FIGS. 761-765 *Synthetonychia hughsoni* n.sp.

Fig. 761 Male pedipalp; Fig. 762 Female pedipalp; Fig. 763 Male genitalia; Fig. 764 Genital operculum of male; Fig. 765 Tarsal claw of leg 4.

Genitalia. As shown in Fig. 763. The aedeagus is flattened dorso-ventrally with two long slender spines on median surface and two small sub-distal spines. There is an elongate, sub-triangular plate extending from the base of the aedeagus to near the mid-point and two setae at each side of the aedeagus, of which the outermost is the stronger.

Chelicerae. Typical.

Pedipalps. As shown in Fig. 761. Tibia without a disto-dorsal process. Tarsal spine small, equal to half the length of tarsal claw.

Legs. Smooth, apart from a few small tubercles on the femora of legs 1 and 2. Tarsal formula 3.5.4.4. Tarsal claws 3 and 4 as shown in Fig. 765. The arolium extends well beyond the median branch.

Measurements

Scute Length 1.44 Width 1.52

	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.41	0.22	0.81	0.33	0.52	0.68	0.44	3.41
Leg 2 ..	0.64	0.24	1.08	0.44	0.88	0.95	0.64	4.87
Leg 3 ..	0.48	0.24	0.93	0.40	0.76	0.84	0.52	4.17
Leg 4 ..	0.72	0.26	1.12	0.48	0.92	1.12	0.56	5.18
Pedipalp ..		0.24	0.92	0.40	0.72		0.60	2.88
Chelicera ..		Basal	0.24	Second	0.48			0.72

Female. Similar in structure to male. The tarsus of the pedipalp is stouter than male, lacking spine (Fig. 762). The genital operculum is slightly wider at the base than it is long.

Measurements

		Scute	Length	1.52	Width	1.44		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.40	0.24	0.74	0.29	0.52	0.64	0.41	3.24
Leg 2 ..	0.64	0.24	1.03	0.41	0.80	0.84	0.57	4.53
Leg 3 ..	0.44	0.25	0.85	0.32	0.72	0.80	0.48	3.86
Leg 4 ..	0.68	0.28	1.08	0.46	0.88	1.08	0.52	4.98
Pedipalp ..		0.24	0.88	0.36	0.72		0.48	2.68
Chelicera ..		Basal	0.22	Second	0.41			0.65

Types. Holotype male, Mount Davie, Greymouth, January 24, 1950, L. P. Hughson (C.M.A. 896); Allotype female, same data (C.M.A. 897); Paratypes: same data, 1 ♂ (C.M.A. 898).

Records. Bullock Creek, Punakaiki, January 18, 1950, R. R. Forster, 1 ♂ (C.M.A. 902).

Synthetonychia florae n.sp.

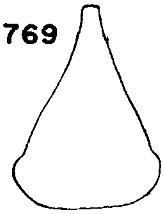
Figs. 766-770

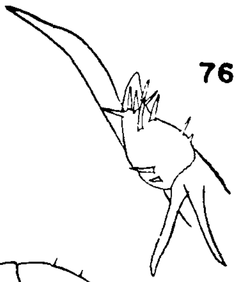
Male

Colour. Reddish-brown.

Body. The eyes are placed in the centre of the carapace and are separated from each other by a distance equal to one and a half times their diameter. The carapace is finely granulate, tergal region with normal granular pattern. The genital operculum is as shown in Fig. 769, sub-triangular longer than wide in the ratio of 4:3.

769





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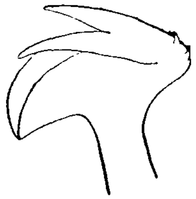

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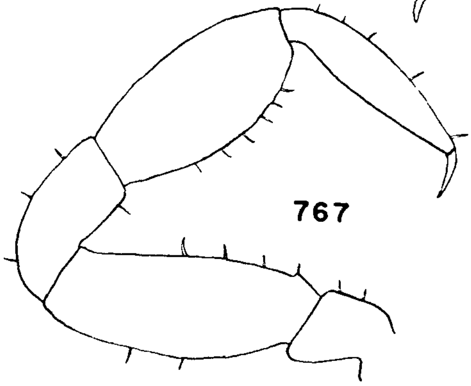
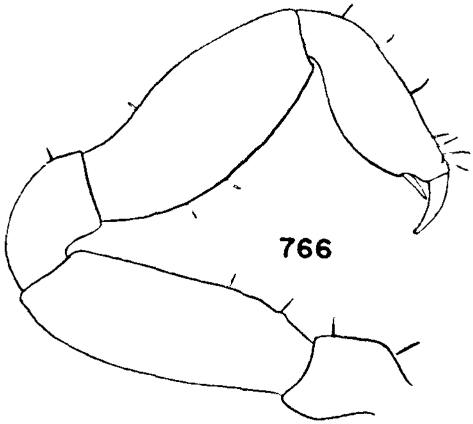




FIGS. 766-770 *Synthetonychia florae* n.sp.

Fig. 766 Male pedipalp; Fig. 767 Female pedipalp; Fig. 768 Male genitalia; Fig. 769 Genital operculum of male; Fig. 770 Tarsal claw of leg 4.

Genitalia. As shown in Fig. 768. Similar in structure to *acuta* but aedeagus shorter and lacking the sub-apical lateral spines, setae with a somewhat different disposition. Dorsal and ventral plates well developed.

Chelicerae. Typical.

Pedipalps. As shown in Fig. 766. Tibial process absent, tarsus stouter than *acuta*, tarsal spine slender equal to half of the length of the tarsal claw.

Legs. As in *acuta*. Tarsal formula 3.5.4.4. Tarsal claws as shown in Fig. 770, the arolium does not extend beyond the median branch.

Measurements

		Scute	Length	1.24	Width	0.90		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.30	0.19	0.56	0.24	0.36	0.44	0.36	2.45
Leg 2 ..	0.48	0.18	0.64	0.33	0.52	0.56	0.48	3.19
Leg 3 ..	0.40	0.17	0.60	0.28	0.52	0.52	0.36	2.85
Leg 4 ..	0.48	0.20	0.72	0.38	0.60	0.72	0.40	3.50
Pedipalp ..		0.16	0.56	0.18	0.48		0.36	1.74
Chelicera ..		Basal	0.18	Second	0.40			0.58

Female. Similar to male in structure. The genital operculum is wider than it is long. The pedipalp is shown in Fig. 767; the tarsus is slender and straight, without a spine.

Measurements

		Scute	Length	1.24	Width	0.90		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.30	0.16	0.48	0.24	0.36	0.37	0.32	2.23
Leg 2 ..	0.44	0.17	0.64	0.32	0.44	0.48	0.40	2.89
Leg 3 ..	0.28	0.17	0.51	0.24	0.40	0.48	0.28	2.36
Leg 4 ..	0.40	0.16	0.68	0.32	0.53	0.68	0.33	3.10
Pedipalp ..		0.12	0.53	0.28	0.44		0.40	1.77
Chelicera ..		Basal	0.20	Second	0.42			0.62

Types. Holotype male, Flora Saddle, 3,200 feet, Mount Arthur Tableland, January 20, 1948, R. R. Forster (D.M.2/886); Allotype female, same data (D.M.2/887).

Synthetonychia minuta n.sp.

Figs. 771-775

Male

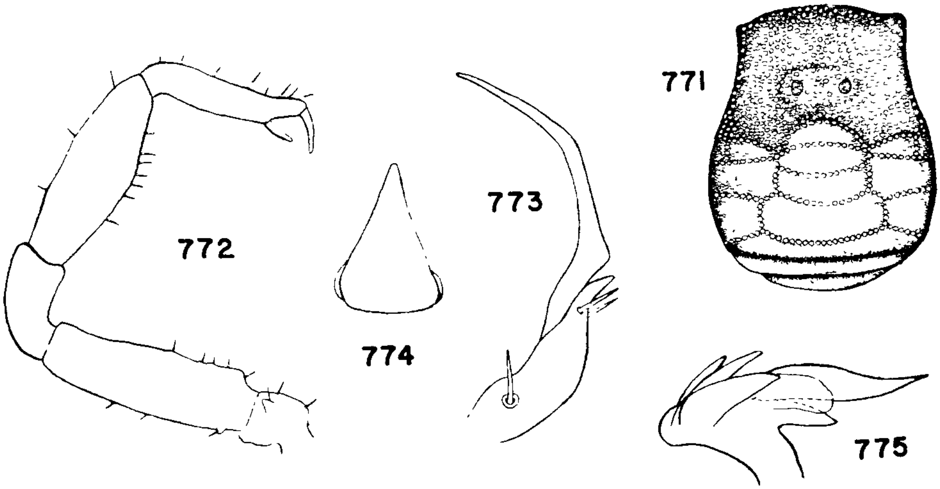
Colour. The entire animal is golden-brown.

Body. Carapace closely covered with small granules, tergal region shiny, with a regular pattern formed by single rows of small granules as shown in Fig. 771. The free tergites and the sternites are smooth. The eyes are set at about one-quarter of the length of the scute, and are separated from each other by a distance equal to three times the diameter of the eyes. The genital operculum is triangular in shape, apex sharply pointed, width at base equal to two-thirds of its length (Fig. 774).

Genitalia. The aedeagus is slender, tubular, with a strong elbow near the mid-point, ventral plate extending to elbow, with a pair of long setae near the base, each set in a socket, and a similar, but smaller sub-distal pair as shown in Fig. 773.

Chelicerae. Basal segment with a distended area on the disto-dorsal surface. Second segment with low setose tubercles on the dorsal surface.

Pedipalps (Fig. 772). There is a small conical tubercle present on the proximo-dorsal surface of the femur and a similarly shaped, smaller tubercle on the distal



FIGS. 771-775 *Synthetonychia minuta* n.sp.
Fig. 771 Dorsal surface body of male; Fig. 772 Male pedipalp; Fig. 773 Male genitalia; Fig. 774 Genital operculum of male; Fig. 775 Tarsal claw leg 4.

pro-lateral surface of the trochanter. The proximo-ventral surface of the femur is slightly raised but does not form a prominent process. The tibia lacks a disto-dorsal process. The tarsus is slender, straight, with a strong disto-ventral spine, two-thirds of the length of the tarsal claw.

Legs. Smooth. Tarsal formula 3.5.4.4. Tarsal claws of legs 3 and 4 as in Fig. 775, arolium extending well beyond the median branch, terminated sharply.

Measurements

		Scute	Length	1.06	Width	0.88		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.24	0.15	0.43	0.24	0.32	0.33	0.30	2.01
Leg 2 ..	0.40	0.16	0.60	0.32	0.48	0.40	0.41	2.77
Leg 3 ..	0.28	0.13	0.49	0.24	0.40	0.48	0.32	2.34
Leg 4 ..	0.44	0.17	0.72	0.28	0.53	0.62	0.32	3.08
Pedipalp ..		0.16	0.53	0.24	0.45		0.40	1.78
Chelicera ..		Basal	0.16	Second	0.38			0.54

Female. Similar to male. Pedipalp more slender, without tubercles or tarsal spine. Genital operculum wider than it is long.

Measurements

		Scute	Length	1.05	Width	0.92		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.25	0.18	0.41	0.20	0.28	0.36	0.28	1.96
Leg 2 ..	0.40	0.16	0.56	0.28	0.40	0.44	0.37	2.61
Leg 3 ..	0.32	0.12	0.46	0.20	0.44	0.41	0.34	2.29
Leg 4 ..	0.46	0.12	0.65	0.30	0.52	0.64	0.35	3.04
Pedipalp ..		0.16	0.46	0.20	0.36		0.20	1.38
Chelicerae		Basal	0.16	Second	0.32			0.48

Types. Holotype male, Camerons, Westland, September 5, 1950, R. Chapman, (C.M.A. 881); Allotype female, Mount Davie, Greymouth, January 24, 1950, R. R. Forster (C.M.A. 895).

Records. Cascade Creek, Eglinton Valley, January 23, 1951, R. R. Forster, 1 ♀ (C.M.A. 882); Lower Hollyford Valley, February 2, 1946, R. R. Forster, 1 ♀ (D.M. 2/885); Resolution Island, Dusky Sound, April 1949, R. Kean, 1 ♀ (D.M.2/883).

Synthetonychia wairarapae n.sp.

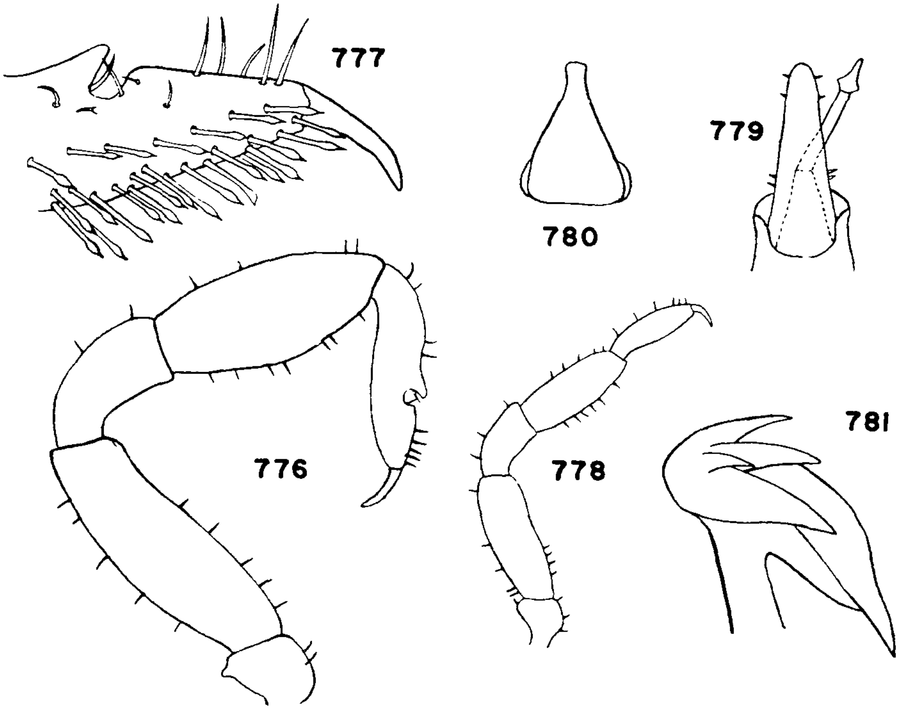
Figs. 776-781

Male

Colour. Uniform orange-brown.

Body. The scute is finely granulate. The eyes are situated at two-fifths of the length of the scute, separated from each other by a distance equal to almost four times their diameter. Free tergites and sternites smooth. Genital operculum as shown in Fig. 780, sub-triangular in shape, with a short apical trunk, without an apical indentation or lateral lobes, longer than wide at the base in the ratio of 4:3.

Genitalia. Basal portion of aedeagus sub-conical, apical portion narrow, tubular, terminated by an arrow-head shaped process as shown in Fig. 779. The ventral plate is represented by a flattened shield which narrows evenly distally, and extends to the apex of the aedeagus. It is provided with four pairs of small spinous setae on the lateral margins, 2 pairs at about one-third and 2 sub-distal pairs (Fig. 779).



FIGS. 776-781 *Synthetonychia wairarapae* n.sp.

Fig. 776 Male pedipalp; Fig. 777 Distal half of tarsus of male pedipalp; Fig. 778 Female pedipalp; Fig. 779 Male genitalia; Fig. 780 Genital operculum of male; Fig. 781 Tarsal claw of leg 4.

Chelicerae. Basal segment with a small swelling on the disto-dorsal surface. Second segment with few low tubercles on the dorsal surface.

Pedipalps (Fig. 776). There is a small tubercle on the disto-dorsal surface of the trochanter. The femur is not modified. Tibia without a disto-dorsal process. The tarsus is relatively slender, not sinuous, with a small lobe on the dorsal surface at three-fifths of its length beyond which there is a deep indentation (Fig. 777). Tarsal spine absent.

Legs. There are a few small setose tubercles, most prominent on the femora. Tarsal formula 3.5.4.4. The tarsal claws of legs 3 and 4 are as shown in Fig. 781. There are three strong lateral branches and a small accessory process; the arolium extends beyond the median plate and terminates sharply.

Measurements		Scute	Length	1.36	Width	1.16		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.36	0.17	0.55	0.24	0.36	0.36	0.37	2.41
Leg 2 ..	0.48	0.16	0.64	0.29	0.56	0.56	0.60	3.29
Leg 3 ..	0.43	0.20	0.64	0.24	0.52	0.64	0.44	3.11
Leg 4 ..	0.62	0.20	0.80	0.37	0.64	0.73	0.49	3.85
Pedipalps ..		0.16	0.66	0.32	0.55		0.46	2.15
Chelicera ..		Basal	0.17	Second	0.44			0.61

Female. Similar in structure with male. The genital operculum is wider than it is long in the ratio of 11:7. The pedipalps are as shown in Fig. 778.

Measurements		Scute	Length	1.08	Width	0.96		
	Cox.	Troch.	Fem.	Pat.	Tib.	Met.	Tars.	Total
Leg 1 ..	0.36	0.13	0.45	0.20	0.27	0.32	0.32	2.05
Leg 2 ..	0.49	0.16	0.63	0.28	0.41	0.48	0.45	2.90
Leg 3 ..	0.40	0.13	0.63	0.27	0.44	0.46	0.33	2.66
Leg 4 ..	0.48	0.15	0.68	0.30	0.52	0.61	0.36	3.10
Pedipalp ..		0.16	0.56	0.31	0.48		0.37	1.88
Chelicera ..		Basal	0.17	Second	0.45			0.62

Types. Holotype male, Mount Ross, South Wairarapa, April 5, 1947, R. R. Forster (D.M.2/897); Allotype female, Turanganui, Wairarapa, June 1949, A. C. O'Connor (D.M.2/898); Paratypes: Turanganui, June 14, 1947, R. K. Dell, 2 ♂ (C.M.A. 890, D.M.2/899).

Records. Ohingaita, near Taihape, May 12, 1947, J. Ramsay, 1 ♂, 1 ♀ (D.M.2/900).

DOUBTFUL RECORDS

Family TRIAENONYCHIDAE

Nunciella granulata Roewer, 1931

1931 *Nunciella granulata* Roewer, Zeit.f.wiss.Zool., 138 (1), p.166.

Roewer described a single male specimen which he recorded from Christchurch, New Zealand. This species has not been re-discovered in New Zealand and it seems highly probable that the species is, in fact, Australian.

Family ASSAMIIDAE

Dampetrellus scaber Roewer, 1926

1926 *Dampetrellus scaber* Roewer, Abh.natw.Ver. Bremen 26 (2), p.351.

Roewer records this species from New Zealand but this family does not occur in New Zealand. It is probable, that, as for the species listed above, the correct locality should be Australia.

NOTES ON BIOLOGY

In New Zealand the harvestmen of the sub-order Laniatores are always found in forested country or in areas which have in recent times been forested but where the bush has been felled and cleared, leaving decaying logs and small pockets of forest, which provide a favourable habitat. The great majority of the species require a high and even relative humidity and in order to keep specimens in captivity it has been found necessary to ensure that the air is fully saturated. There are, however, a number of species of *Algidia* and some of the more widely distributed and larger species of *Nuncia* which can exist in a relatively dry atmosphere. Experimental studies may well show some correlation between the moisture requirements and the distribution of some species.

All of the New Zealand species are nocturnal and are usually collected when at rest in daylight when they are to be found sheltering beneath logs and stones, in the debris on the forest floor, in moss growing in similar situations or on the trunks and branches of trees in the wetter areas. It is not uncommon to find five or six species of several genera sheltering under the one log. The leaf mould fauna consists mainly of the smaller species of *Nuncia* and species of *Pristobunus*. The Synthetonychids are only found in leaf mould and moss. *Muscicola picta*, *Algidia viridata* and *A. viridata bicolor* appear to be restricted to moss and are distinguished by their striking green colouration.

No altitudinal speciation has been observed. Only a few species have been found above bush-line and then only in small numbers in sub-alpine scrub. They are more numerous near sea-level and progressively diminish in numbers at higher altitudes. Very few are encountered above 2,500 feet. The only harvestmen found in New Zealand under alpine conditions are members of the sub-order Palpatores.

FOOD

Food appears to consist mainly of insects and other small arthropods. I have not observed the capture of live prey, but in captivity a large number of species have fed on dead insects and also meat. They are not averse to eating their own dead in captivity but have not been observed to attack each other. Food is grasped by the pedipalps and then passed to the chelicerae, which hold it against the chewing plates associated with the mouth. No poison glands have been detected in either pedipalps or chelicerae.

The group is not attacked by spiders but infestation by nematodes and chalcid wasps has been noted. Specimens are often found heavily infested with mites which cling to intersegmental membranes of abdomen and appendages.

MATING AND EGG-LAYING

Mating has been observed in species of both *Nuncia* and *Algidia*. The copulation is direct with little prenuptial behaviour. The male approaches the female rapidly, touching her with the tarsi of leg 2. When face to face the male clasps the female's pedipalps with his own. Both bodies are then raised bringing the genital openings in line. The long penis of the male is then exserted and placed directly into the genital opening of the female. In no case observed has the female exserted her ovipositor to receive the penis. Mating usually takes place in October or November, but has been observed during September. Eggs are laid by most species between late October and December. No eggs appear to be laid in the autumn for over-wintering, as is the case in some English Palpatores. (Savory, 1938.)

There are two contrasting egg-laying behaviour patterns found in the *Triaenonychidae.* I have used these patterns as additional support for the division of the *Triaenonychidae* into two sub-families viz.:—*Triaenonychinae* and *Soerensenellinae.* The *Triaenonychinae* deposit their eggs in small groups numbering from 1-5, among leaf mould or more commonly in rotting wood, and these receive no further attention.

Females of *Hendea myersi* maintained under laboratory conditions laid from 20-60 eggs during two weeks.

The *Soerensellinae* by contrast select the under surface of a log or occasionally a loose fitting rock for oviposition. A small group of eggs, from 10-20, are laid and are then guarded by the female. At intervals of a few days or a week further eggs are deposited so that in some cases egg masses of some 60-100 eggs may be found, some of which are hatching, while others are found at all stages, often including newly laid eggs. Eggs observed under laboratory conditions took 20 days to hatch and field observations suggest that this period is normal for many species.

POLYMORPHISM

The incidence of polymorphism in the species studied, apart from the sex ratio, falls into two categories (*a*) *Sex dimorphism*, which is well known, although often overlooked in systematic studies and (*b*) *Male dimorphism* or *Poicilandry* which has not been recognized previously in the Opiliones, but which possibly occurs frequently in the group.

Failure to recognize these characters would result in a great number of anomalies in the systematics of the group and has already produced a number of synonyms among New Zealand forms, due particularly to the use of the tarsal formula as a rigid generic character. In some cases this has resulted in males and females of a single species being placed into separate genera.

SEX DIMORPHISM

Secondary sexual characters are to be found in the great majority of *Triaenonychidae* and all of the *Synthetonychidae*, and are practically confined to the males.

Triaenonychidae

Legs. There is little differentiation shown in the structure of the legs. The fourth femur of the male of *Triregia fairburni* is conspicuously stouter than that of the female. In a few species of *Nuncia*, *Prasma* and *Soerensenella*, the number of segments to tarsus 1 is greater in the male than in the female (4 male, 3 female). In the genus *Neonuncia* there is a strong clavate tubercle on the ventral surface of the first pedal coxa which is more spiniform in the female. A similar but stronger structure is present on the first coxa of *Hedwiga manubriata.*

Chelicerae. There are seldom prominent secondary characters present on the basal segment although this is often relatively longer and more slender in the male. In *Karamea tuthilli* the basal segment is provided with a disto-dorsal spine which is much more strongly developed in the male than in the female. In a number of species of *Hendea* there is a prominent bifid tubercle on the proximo-dorsal surface of the second segment of the male which is present in the form of two closely spaced and smaller tubercles in the female. In *Hendeola* the strong spinous process rising from the proximo-dorsal surface of the second segment of the male is absent in the female.

Pedipalps. Secondary sexual characters of these appendages are usually most striking. With very few exceptions the pedipalps of the male are decidedly longer than the female. The femur is usually much stouter and in many species the tibia is also stouter and longer than in the female. The tubercles of the pedipalps are usually much stouter in the male but not necessarily longer. In *Pristobunus* there is little, if any, difference between male and female pedipalps. A most striking difference is present in *Hedwiga manubriata.* The femur of the "Form A" male is greatly elongate, more than twice as long as the femur of the female and is bent at almost a right angle at one-third of its length. The femur of the "Form B" male is similar in general structure but less strongly bent. The female pedipalp is normal in appearance.

Body. Lawrence (1937) in his account of the sexual differences of the South African Opiliones, recorded that the body of the female is generally larger than that of the male, but that this is by no means invariable. A similar situation exists in the New Zealand species but a large number of species show only slight differences. The eyemound of the New Zealand species does not show much dimorphism. However, when spinous processes are present on the eyemound they are usually smaller in the female. In the genera *Hedwiga*, *Hendea*, *Prasma* and *Soerensenella* the difference is slight.

Karamea lobata and *Karamea tuthilli*, however, show striking dimorphism. The prominent spine of the male is greatly reduced in the female. *Pristobunus* is characterised by a specialised eyemound which shows no dimorphism.

Scute. Scutal tubercles are usually more prominent in the male. In *Pristobunus*, *Cenefia* and *Triregia* there is no difference shown in the numbers and size of pustules between male and female. In *Algidia*, however, the pustules form a much more complete pattern in the females, whereas in *Prasma* the pustules are usually slightly larger or fewer in number in the males.

Genital Operculum. The relative width of the genital operculum of the female is always greater than that of the male. The female operculum is always evenly rounded on the anterior margin, while the male operculum is occasionally more pointed anteriorly. This condition is most pronounced in *Nuncia stewartia* where the male operculum is sub-triangular in shape.

Anal Plate. Secondary sexual characters associated with the anal plate have not been recorded for New Zealand species.

Synthetonychidae.

Secondary sexual characters are very pronounced in this family but are limited mainly to the pedipalps and the genital operculum. The pedipalps of both male and female lack setose tubercles. The male pedipalp is usually stouter but may be longer or shorter than the female. In the majority of species (not in *Synthetonychia hughsoni*, *florae*, *minuta* and *wairarapae*) there is a strong projection from the disto-dorsal surface of the tibia. This process is absent in the female. In all species except *Synthetonychia wairarapae* there is a prominent articulated spine on the ventral surface of the tarsus. In *wairarapae* the tarsus of the male is indented on the dorsal surface and lacks a ventral spine. In all species the genital operculum of the male shows some modification, varying from the triangular form of *minuta* to the prominent anteriorly elongated form found in *oliveae*.

MALE DIMORPHISM OR POICILANDRY

The term Male Dimorphism covers the situation found in a number of New Zealand Laniatores where two distinct forms of males occur in the same locality and where these forms do not show graded differences. As discussed later this condition approaches that found in certain mites, where it has been termed *Poicilandry*. This dimorphism may be expressed in all or some of the following characters: the colouration and texture of the scute; the structure and size of the pedipalps; the size of the chelicerae; or the presence of a chitinous process on the maxillary lobes of coxae 2.

The form which differs most from the female I have termed the "*Form A*" *Male*, the male showing "femaleness" is termed the "*Form B*" *Male*.

TABLE 2

Percentage of Form A and B males and of Females in some species of the genus Nuncia

		A	B	Female	Total Examined
coriacea coriacea ..	..	26.1	22.7	51.2	23
coriacea cockayni	Wellington	0	37.5	62.5	40
	Elsewhere	17.8	17.8	64.4	135
variegata variegata ..	..	25.0	21.0	54.0	76
variegata delli ..	..	33.9	13.1	55.0	221
smithi	..	35.9	16.2	47.9	179
stewartia stewartia	..	30.9	23.5	45.6	191
stewartia tumosa ..	..	46.3	11.6	42.1	95
obesa grimmetti ..	..	0	43.5	56.5	338
heteromorpha ..	..	0	39.4	60.6	98
grandis	..	0	55.7	44.3	43

From the tables showing the ratio of males and females gathered by random collecting for systematic study, it is clear that the sex ratio for these species is approximately 1:1. The species listed above have been chosen because they are the most numerous in the collections studied. It would appear that this ratio is held for almost all of the New Zealand Laniatores regardless of the presence of male dimorphism.

In only two genera is there a gross departure from this ratio. *Soerensenella rotara* (16 specimens) and the pale form of *s. bicornis parva* (16 specimens) are known only from females. As there is no evidence to suggest that the males of these species live in an entirely different and as yet undiscovered habitat (a very unlikely possibility owing to the comprehensive collecting techniques used in addition to visual collecting e.g. Berlese Funnel, beating, etc.) there arises a suspicion that parthenogenesis may take place in some species.

In *Prasma* however, males are rarely found but are recorded for all species and sub-species except *Prasma tuberculata mearosa*, of which twelve females but no males are recorded.

Coloration and Texture of Scute

In nunciaeform harvestmen the scute of the female is usually heavily shaded with dark-brown or black pigment which may be uniform or relieved by a series of crescent-shaped orange-brown markings in the position of the fused tergal areas. The scute of "Form A" males is usually only faintly shaded with dark pigment leaving the orange-brown colour of the chitin predominant. "Form B" males, on the other hand, are usually little different from the female in coloration. The texture of the scute shows a marked differentiation in the sub-genus *Corinuncia*. The scute of the "*Form B*" male and the female is usually coriaceous, while the scute of the "*Form A*" male is finely granulate or only faintly coriaceous.

Pedipalps

There is a marked difference in the length of the pedipalps of the two male forms. The "*Form A*" type is much longer than in "*Form B*", while the length of the "*Form B*" is usually not much more than that of the female.

The femur and tibia of "*Form A*" are longer and the tubercles lining the ventro-lateral margins of tibia are often reduced in size. In *Hedwiga manubriata* the femur of the pedipalp is greatly elongated, and bent at right angles in "*Form A*" but shorter and more evenly curved in "*Form B*".

Chelicerae

These are conspicuously longer and relatively more slender in the "*Form A*" male.

Maxillary Lobes

The "maleness" is indicated by a secondary process which takes the form of a blunt tubercle which, however, is not provided with the usual sub-apical seta.

TABLE 3

**Table showing occurrence of Male Dimorphism in Nuncia*

NUNCIA Sub-Gen. *Nuncia*	*Form A*	*Form B*
obesa obesa	O	X
,, grimmetti	O	X
,, magna	O	X
,, rotunda	O	X
oconnori oconnori	O	X
,, conocula	X	O
,, kopua	O	X
paucispinosa	X	X
sulcata	X	O
heteromorpha hetermorpha	O	X
,, prolobula	O	X
grandis	O	X
dentifera	O	X
conjuncta conjuncta	X	O
,, magnopercula	X	O
,, fiordensis	O	X
vidua	X	O
fatula	X	O
constantia	O	X
inopinata	X	O
tumula	O	X
tapanuiensis	X	O
arcuata	O	X
arcuata aorangiensis	X	O
stabilis	O	X

*X = present; O = absent

	Form A	*Form B*
Sub.-Gen. *Corinuncia*		
coriacea coriacea	X	X
,, cockayni	X	X
variegata variegata	X	X
,, granulata	X	X
,, delli	X	X
,, australis	O	X
smithi	X	X
sublaevis	X	O
stewartia stewartia	X	X
,, tumosa	X	X
tumidarta	X	O
planocula	X	O
frustrata	X	O
nigriflava nigriflava	X	O
,, parva	X	O
,, parvocula	X	O
pallida	X	O
elongata	X	O
levis	X	O
Sub.-Gen. *Micronuncia*		
roeweri roeweri	X	X
,, humilis	X	O
,, moderata	O	X
,, callida	X	X
,, unica	O	X
,, seditiosa	X	X
,, gelida	X	O
,, pilgrimi	X	X
,, demissa	X	O
,, contrita	O	X
alpha	O	X

X = present; O = absent

Male dimorphism has been found to be particularly common in the genus *Nuncia*. Of the fifty-six species and sub-species recognized, fourteen are known to have both A and B forms, twenty-two A forms only and twenty B forms only. It is certain that as further collecting is carried out many more species will be found to exhibit male dimorphism. Of the remaining genera only two show definite dimorphism. There are 13 forms now known in *Hendea*, 10 have "Form A" males, 2 have "Form B" males and one which I have not been able to examine is uncertain. In no cases have both forms been recorded for one species in this genus. *Hedwiga* with a single species, shows a most striking difference in the femur of the pedipalp as mentioned earlier.

Algidia chiltoni oconnori known only from males may well be a dimorphic form of *chiltoni*. If this should prove to be the case, the males known for almost all of the recorded species would be placed under "Form A". It has not been possible, as yet, to collect a sufficient series of samples of the various species exhibiting male dimorphism for any exhaustive statistical analysis of the relative occurrence of the two forms of males to be made.

The figures listed earlier (Table 2) indicate that the ratio of males and females, irrespective of the occurrence of male dimorphism, is approximately 1:1. When male dimorphism does occur it would seem that the relative occurrence of A and B forms differs widely between species and sub-species and in some cases at least, between populations. In *Nuncia coriacea coriacea*, *Nuncia coriacea cockayni* and *Nuncia variegata variegata* the ratio of A and B males is approximately 1:1, but *Nuncia stewartia tumosa* shows a ratio of A:B=4:1 and the other listed species fall between these ratios. It should be noted that *Nuncia coriacea cockayni* is not polymorphic throughout its whole range. The Wellington population (Wellington city and environs) consists of only "Form B" males. Much work remains to be done before any light will be thrown on the factors governing the phenomenon described above. There has been little work done on the sex determining mechanism of harvestmen. Sokolow (1913, 1929 a,b) and Tomohiro (1940) investigated the spermatogenesis of species of the S. O. Palpatores and failed to demonstrate any heterogamety in the male. Females have not been investigated. It is therefore possible that haplo-diploidy may occur in this group as in a number of families of mites. André (1949) gives a general account of the Acari and lists a number of examples of male polymorphism found in the mites, to which he gives the term *Poicilandry*. In a number of species (e.g. *Hemialges* sp., *Falculifera echinopus*) two different forms of males are known, one similar in structure to the female (*homeomorph*) and the other with prominent secondary characters (*heteromorph*) and both forms have been shown to be fertile and capable of mating. This condition closely parallels that found in Opiliones. However, in some species (e.g. *Analges chelopus* (Herm.) a number of forms are found which show a gradient between the heteromorphic and homeomorphic males. These series result from the degeneration of the reproductive system and associated secondary characters following the failure of the individual to mate on reaching sexual maturity. André concludes that although genetic factors play a very important part in this polymorphism the influence of the external environment cannot be ignored. It would appear that in the harvestmen both forms of male are fully capable of mating and it is logical to suggest that the occurrence of this polymorphism will eventually be found to be of purely genetic origin.

RELATIONSHIP OF THE NEW ZEALAND FAUNA TO THE WORLD FAUNA

It is becoming increasingly evident that the study of the invertebrates confined by high humidity requirements to forested areas will provide reliable evidence for use in zoogeographical problems.

The New Zealand *Laniatores* are placed in two families of which one, the *Synthetonychidae* is, as far as is known at present, restricted to New Zealand. The second family, the *Triaenonychidae* is widely distributed, having been recorded from South America, Southern United States, South Africa, Madagascar, Australia, Tasmania, New Caledonia and New Zealand. This predominantly southern distribution is repeated in a large number of varied groups of plants and animals and has given rise to numerous hypotheses calling on Antarctic land bridges to provide a means of dispersal between the southern continents and New Zealand. There is little evidence to support the need for an Antarctic land bridge to account for the New Zealand Opilionid fauna, as it is related, at a generic level, with that of Australia and New Caledonia. If the ancestral New Zealand fauna was derived from Australia, geological evidence (Fleming, 1948) would suggest that migration could have taken place during the Trias-Jura period which closed with orogeny and uplift of sediments which could possibly have provided a link between the two areas.

The sub-order *Cyphophthalmi* has not been previously recorded from Australia but the writer has recently received from Dr. T. E. Woodward numerous specimens of a species, related to the New Zealand *Rakaia*, which were collected in Queensland.

The overall distribution of the Opiliones suggests a primary origin in the Northern Hemisphere and subsequent southern migration and the present distribution would indicate that this process is still being accomplished.

In South America the two dominant families are the *Gonyleptidae* and the *Cosmetidae*, while the *Triaenonychidae* are restricted to Chile. The few North American species of the family *Triaenonychidae* recorded are isolated relics which could indicate a northern origin for the South American *Triaenonychids*. Lawrence (1951) notes that in South Africa the dominant family at the southern end of Africa is the *Triaenonychidae* but passing northernwards it rapidly decreases in numbers, being replaced by the *Assamiidae* which is dominant through the central belt of Africa from West to East. This same trend is found in Australia (Forster M.S.). The southern fauna is predominantly *Triaenonychidae* and the *Assamiidae* and *Phalangodidae* are more numerous to the north.

The absence of these more advanced northern elements from the fauna of New Zealand can be best explained by assuming that it was cut off from the continent of Australia prior to the penetration of the *Assamiidae* and *Phalangodidae*.

DISTRIBUTION WITHIN NEW ZEALAND

The distribution of harvestmen in New Zealand is influenced strongly by ecological factors, of which the most important is the maintenance of a constant high relative humidity coupled with even temperatures. The *Cyphophthalmi* and *Laniatores* in particular are restricted largely to forested areas, although the occurrence of species of *Neonuncia* on Campbell Island does indicate that some of these animals can exist in more or less open conditions. The *Palpatores* are mainly found in similar habitats but also may be found in open tussock country and under alpine and sub-alpine conditions. The systematic treatment of the Palpatores is, unfortunately, not sufficiently complete for them to be included in the present discussion.

The nocturnal and cryptozoic habit of the groups under consideration does not lend itself to distribution by chance methods, and it is improbable that drift on floating logs or debris has played any great part in establishing the distribution patterns which are characteristic for the present fauna. It may therefore be inferred with reasonable assurance that continuous land or closely spaced islands are necessary for dispersal and that topographical features, such as water barriers and mountain ranges have played, and are still playing, an important part in the segregation of populations and their subsequent speciation. If this is so, a distribution pattern which ignores a major water barrier may well point to former land connections, and conversely, one which shows discontinuous distribution in an area where there is at present no apparent barrier may point to the presence of an effective barrier in the past.

It may therefore be implied that distribution patterns exhibited by present day fauna will reflect recent geological change undergone by the area under consideration.

The distribution of 121 species and sub-species of the sub-orders *Cyphophthalmi* and *Laniatores* has been plotted in the accompanying maps (see appendix) and it is suggested that this data supports the division of New Zealand into nine faunal areas.

Faunal Areas

AREA A. The North Cape District extending south to Auckland. This region is characterised by a strongly endemic fauna, *Nuncia coriacea*, *N. sulcata*, *N. paucispinosa*, *N. oconnori*, *Triregia fairburni*, *T. bilineata*, *Soerensenella prehensor*, *S. prehensor obesa*, *Pristobunus acentrus hilus*, *Hendeola woodwardi*, *H. bullata pterna*. The Three Kings Is. appear to be a sub-section of this area. The sole species recorded, *Triregia monstrosa* is related to *T. bilineata*.

AREA B. The East Cape District with an eastern boundary passing through Lake Waikaremoana. This area shows strong affinity with Area A. The dominant forms are sub-species of northern species, *Nuncia oconnori kopua*, *N. oconnori conocula*, *Triregia fairburni grata*, *Soerensenella prehensor nitida*. *Nuncia paucispinosa* is common to both Areas A and B. *Nuncia grandis*, *N. conjuncta*, and *Rakaia inerma* are found only on the eastern fringes of this area and are considered to be elements of Area C.

AREA C. The central portion of the North Island, including the area enclosed by the southern boundary of Area A and the eastern boundary of Area B and a further boundary to the south extending across the island from the vicinity of Levin. This is the largest area proposed and is characterised by the wide distribution of the fauna within the area and the paucity of localised endemic forms. Typical forms are:—*Nuncia grandis*, *N. conjuncta*, *N. alpha*, *Pristobunus acentrus*, *P. acuminatus hamiltoni*, *Hendeola bullata*, *Algidia chiltoni*, *Soerensenella rotara*, *Rakaia inerma*, *Rakaia dorothea media*, *R. tumidata*, *R. crypta*, *R. granulosa* and *Neopurcellia minutissima*.

AREA D. The west coast region of the South Island as far south as the Haast River, with the eastern boundary running down the main divide and including the country to the west of Pelorus Sounds, and D'Urville and Stephen Islands.

The fauna of this area shows two distinct facies: (1) a well developed endemic fauna centred in the northern portion of the region, and (2) a series of forms which are identical with or closely related to elements of the fauna of Area C.

(1) *Nuncia dentifera*, *N. heteromorpha*, *N. heteromorpha prolobula*, *N. vidua*, *N. fatula*, *N. levis*, *N. elongata*, *Hendea oconnori*, *Algidia viridata*, *A. viridata bicolor*, *Cenefia westlandica*, *Pristobunus laminus*, *Karamea lobata*, *K. lobata aurea*, *K. lobata australis*, *K. tricerata*, *Neopurcellia florensis*, *Rakaia denticulata*, *R. denticulata major*.

(2) The second element may be further separated into two groups:—

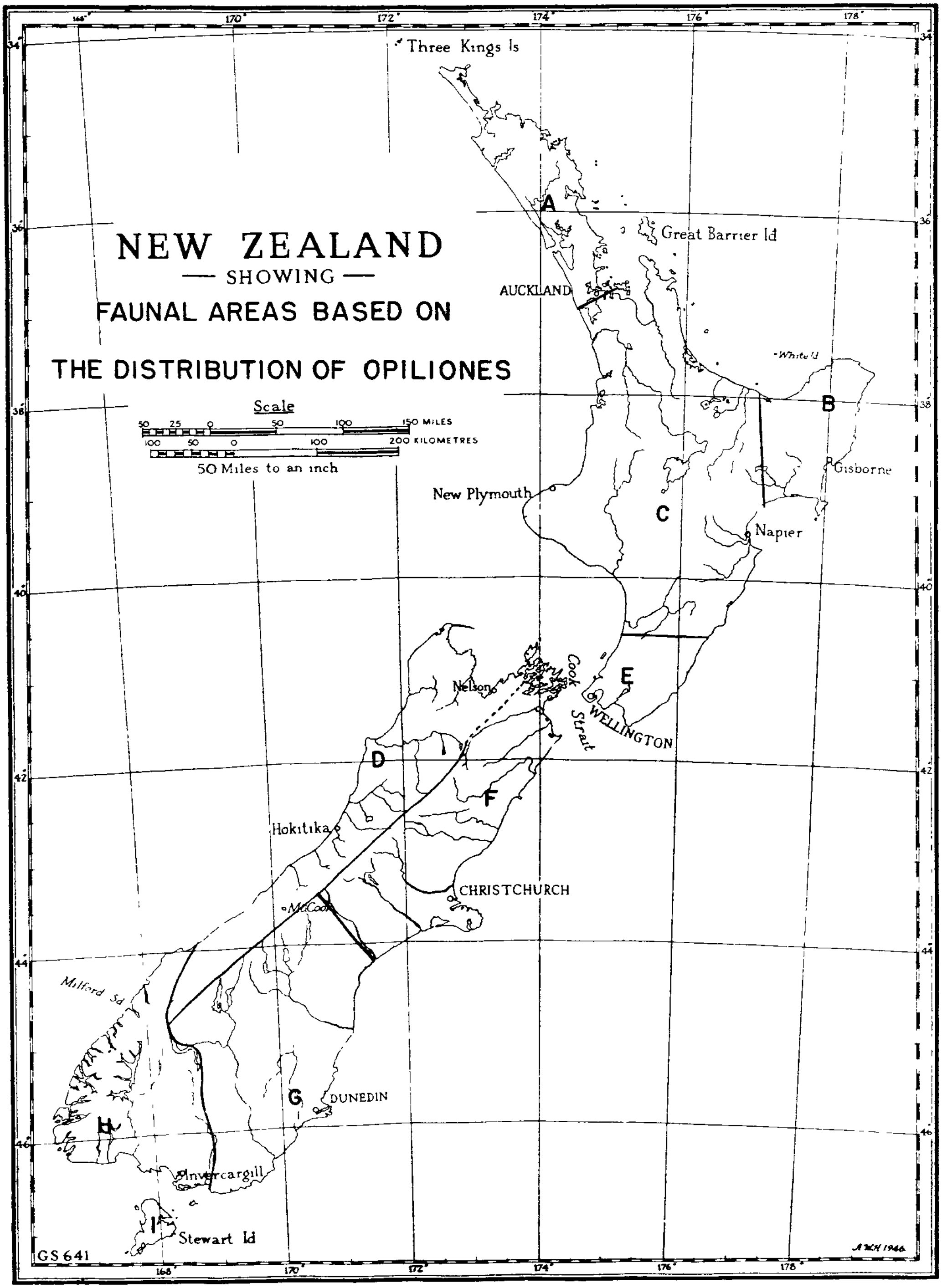
(*a*) Identical with North Island forms:—*Nuncia grandis*, *N. conjuncta*, *Algidia chiltoni*, *A. nigriflava*, *Neopurcellia minutissima*.

(*b*) Closely related to North Island forms:—*Nuncia obesa*, *N. obesa magna*, *Hendea myersi assimilis*, *H. myersi ochrea*, *H. myersi roeweri*, *Prasma tuberculata intermedia*, *Pristobunus acuminatus acantheis*, *P. acentrus insulanus*, *P. acentrus nodosus*, *Rakaia inerma stephenensis*.

AREA E. The southern portion of the North Island with the northern boundary running to the east from the vicinity of Levin. The forms characteristic for this area are:—*Nuncia coriacea cockayni*, *N. nigriflava parva*, *N. contrita*, *N. conjuncta magnopercula*, *N. arcuata*, *Hendea myersi*, *H. phillippsi*, *Pristobunus henopoeus*, *Prasma tuberculata mearosa*, *Soerensenella bicornis waikanae*, *Synthetonychia ramosa*, *S. wairarapae*, *Rakaia dorothea*, *R. antipodiana solitaria*, *R. magna*.

AREA F. The east coast of the South Island from Pelorus Sounds in the north to the Rangitata River in the south and bounded to the west by the main divide. The fauna of this area is noteworthy in that it shows strong relationship with Area E, the southern portion of the North Island but no affinity with Area D on the west side of the South Island. The endemic fauna is small:—*Nuncia inopinata*, *Algidia cuspidata* and *Pristobunus synaptus* are centred in mid-Canterbury-Banks Peninsula and Oxford District. *Pristobunus barnardi*, *Synthetonychia obtusa*, *S. proxima*, and *Rakaia healyi* are centred in Northern Marlborough.

There is an extensive fauna identical with or closely related to North Island forms:—*Pristobunus henopoeus pelorus*, *P. h. gorensis*, *Nuncia nigriflava*, *N. roeweri*, *N. roeweri moderata*, *N. roeweri pilgrimi*, *Prasma tuberculata*, *Soerensenella bicornis*, *Rakaia antipodiana*, *R. magna australis*. This area appears to be the centre for the *Soerensenella bicornis* and *Nuncia roeweri* series. Four further forms *Hendea myersi*, *Nuncia coriacea cockayni*, *Nuncia obesa grimmetti* and *Nuncia smithi* are also found in this area. The first two forms are considered to be elements of Area E which have, in comparatively recent times, migrated to the eastern portion of the South Island while the latter two are considered to represent a contemporaneous reversal of migration from south to north. The three forms of *Nuncia* are perhaps the most hardy of the Laniatores, being found in numerous localities where no other harvestmen seem able to exist.


NEW ZEALAND
— SHOWING —
FAUNAL AREAS BASED ON
THE DISTRIBUTION OF OPILIONES
Scale
50 25 0 50 100 150 MILES
100 50 0 100 200 KILOMETRES
50 Miles to an inch
Three Kings Is
A
Great Barrier Id
AUCKLAND
White Id
B
Gisborne
New Plymouth
C
Napier
E
Nelson
Cook Strait
WELLINGTON
D
F
Hokitika
CHRISTCHURCH
McCook
Milford Sd
G
DUNEDIN
H
Invercargill
I
Stewart Id
GS 641
A.W.H. 1946
166° 168° 170° 172° 174° 176° 178°
34° 36° 38° 40° 42° 44° 46°

AREA G. The east coast of the South Island south of the Rangitata River, bounded to the south by the Mataura River and Lake Wakatipu and to the west by the main divide.

This area is characterised by a definite endemic fauna which shows affinities with both Areas F. and H.

Nuncia obesa rotunda, *Nuncia sublaevis*, *N. roeweri callida* and *Rakaia antipodiana pauli* show affinity with Area F.

Nuncia frustrata (c.f. *N. stewartia tumosa*), *Prasma sorenseni regalia*, *Cenefia sorenseni*, *Algidia interrupta*, and *Rakaia sorenseni digitata* show affinity with Area H.

The inland areas show evidence of effective local isolation as instanced by the occurrence of *Karamea tuthilli* and *Rakaia longitarsa* in the eastern Mount Cook area and *Prasma tuberculata mulsa* at Hawea.

AREA H. The Fiordland-Southland area with a northern boundary following the Haast River, Lake Wakatipu and the Mataura River.

This area supports a diversified and strongly endemic fauna. *Nuncia variegata*, *N. stewartia tumosa*, *N. roeweri seditiosa*, *N. conjuncta fiordensis*, *Neonuncia blacki*, *Hendea fiordensis*, *Prasma sorenseni*, *Algidia interrupta*, *Cenefia sorenseni*, *Pristobunus acuminatus*, *Muscicola picta*, *Synthetonchia cornua*, *S. minuta*, *S. fiordensis*, *Neopurcellia salmoni*, *Rakaia* n.sp. (found to the West of Te Anau), *Rakaia sorenseni*. There is a further localised element found in the Bluff-Te Wae Bay area which is discussed in conjunction with the Stewart Island fauna.

AREA I. Stewart Island.

The major proportion of the fauna is endemic and shows affinities with the fauna of Area H.

The characteristic forms are as follows:—*Nuncia stewartia*, *N. tumidarta*, *N. variegata granulata*, *N. nigriflava parvocula*, *Hedwiga manubriata*, *Pristobunus ceratias*, *P. ignavus*, *P. heterus*, *Karamea trailli*, *Rakaia stewartiensis*, *R. lindsayi*.

Five of these forms also occur on a small area of the mainland opposite Stewart Island viz. *Nuncia stewartia*, *Nuncia variegata granulata*, *Hedwiga manubriata*, *Pristobunus ceratias* and *Karamea trailli* while two further forms, *Nuncia conjuncta fiordensis* and *Nuncia roeweri seditiosa* which occur on Stewart Island are widespread in Area H and are considered to be mainland endemics which have migrated to Stewart Island.

SPECIATION

The present data provide no evidence to support the occurrence of ecological speciation but strongly suggest that geographical speciation would account for the development of most if not all of the abundant fauna recorded from New Zealand. Extensive collecting from numerous localities at varying altitudes has failed to produce any examples of altitudinal speciation and only few genera are not found throughout most of the length of New Zealand. There appears to be no correlation between distribution and the type of forest cover.

There is no accurate information available regarding speciation rates in the harvestmen, or in fact for the Arachnida as a whole, and our ignorance of this crucial factor must place conclusions based on the effects of isolation due to geological change on a highly tentative basis.

However, the occurrence of a section of the typical Stewart Island fauna on the mainland of the South Island across the Foveaux Strait does suggest a recent interchange of fauna between these two areas. The occurrence on Stewart Island of a number of sympatric species (*Pristobunus ignavus*, *P. ceratias*, *P. heterus*, *Nuncia stewartia*, *N. tumidarta*) suggests a series of invasions and re-invasions from the mainland following periods of isolation of sufficient time length to permit physiological isolation to be achieved. Geological evidence supports this hypothesis suggesting as it does that linkage with the mainland could have taken place with the recession of sea during the glacial periods of the Pleistocene (Fleming 1948) and that this link would be submerged during the interglacials. The last link between the mainland and Stewart Island was possibly achieved with the withdrawal of sea associated with the Mankato Maximum which, according to radiocarbon, dating (Flint and Deevey 1950), was at its peak approximately 11,000 years ago. If this is so we could assume that a period of isolation of a duration somewhat less than 11,000 years has failed to produce any visible signs of sub-speciation.

Bio-Glacial Control

Willett (1951) discussing the climatic conditions and the related biological effects of the Pleistocene glacial epoch suggests that during maximum glaciation a periglacial zone covered the southern part of the South Island and possibly the western coastal area of the Wellington province and that from this area forest would have been driven out except for a few survivals that probably persisted in the northern and north-eastern parts of the South Island and the northern and eastern parts of the North Island.

This conclusion has considerable bearing on the interpretation of the distribution of the present fauna in relation to geological change. The presence of an extensive endemic forest-dwelling fauna in areas postulated as periglacial suggests that Willett's assumptions of the effect of glaciation on the flora were too sweeping. If the forest habitat were to be completely destroyed over the major portion of the South Island and Stewart Island it might be expected that, while a few forms were able to adapt themselves to an open and exposed habitat, the vast majority would be exterminated. With the subsequent re-afforestation from isolated areas of bush which survived maximum glaciation, a similar re-occupation would be expected by those forest-dwelling animals which had previously been restricted to these isolated remnants. The resultant effect on the distribution of this fauna should then be expressed by the presence of a widespread and uniform fauna in the South Island and Stewart Island and probably a few forms would still be found clinging to exposed habitats. The presence of an extensive and endemic forest-dwelling fauna in the areas outlined by Willet as periglacial, particularly in the Southland-Fiordland area and Stewart Island and the absence of grassland and alpine forms, would indicate that this is not so.

H. W. Wellman (Pers. Comm.) suggests that while it is probable that the larger forest trees were driven out of the majority of the areas postulated by Willet as periglacial, it is quite possible that considerable areas of low shrubby forest remained throughout maximum glaciation and thus provided a suitable habitat for the continued existence of a considerable section of the forest fauna.

The distribution of the fauna of the west coast of the South Island is strongly suggestive of bio-glacial control paralleling as it does that of the Paryphanta snails for which Willett postulated a similar origin.

FAUNAL AREAS IN RELATION TO PALEOGEOGRAPHY

North Island

The most striking features demonstrated by the distribution of the harvestmen in the North Island is that there are two well defined breaks, one in the region of

Auckland and the other further south in the vicinity of Levin, which more or less divide the island into three distinct areas, each characterised by its own distinct fauna and with only a few forms common to all areas. Furthermore, the East Cape district possesses a somewhat less distinctive fauna which is closely related to that of the North Auckland area.

Fleming (1949) published a valuable survey of the paleogeography of New Zealand in which it is suggested that during the Waitotaran (Lower Pliocene) the sea flooded the Manukau lowlands, near Auckland, probably forming a strait which isolated the northern portion of the North Island. It seems reasonable to assume that the divergence of the North Auckland fauna dates from the formation of the Manukau Strait. The presence of a number of sympatric species in this area (*Triregia fairburni*, *T. bilineata*, *Nuncia sulcata*, *Nuncia paucispinosa*, *Nuncia oconnori*) indicates that this area was further separated into a number of smaller isolated areas for considerable periods of time. The presence of *Triregia monstrosa* on Three Kings suggests also that the isolation of these islands has been of considerable duration.

The southern faunal break would appear to be related to the presence of the erstwhile Manawatu Strait which during the Waitotaran and Nukumaruan extended across the North Island with the northern coast running from the vicinity of New Plymouth in the west, to Raetihi and then into Hawkes Bay.

The origin of the East Cape fauna is closely linked with that of the North Auckland fauna to which it is closely related, but is separated from it by a considerable stretch of country which supports the entirely different fauna characteristic for the central North Island. There is little doubt that the great Ignimbrite eruptions which have been such a prominent feature in the recent paleogeography of Taupo and Bay of Islands area, have played a prominent part in controlling the faunal distribution in these areas. The effect of these eruptions, which occurred from the Castlecliffian (Early Pleistocene) until comparatively recent times, would have been to wipe out the fauna from large areas and the subsequent re-population would be from the marginal areas which escaped devastation. If re-population were to be assumed to have been from the wouth-west, the widespread distribution of the central North Island fauna would be explained and the East Cape fauna could be considered as a relict group which escaped the effect of the ash showers and has been able to resist subsequent invasion from the central area.

Cook Strait

The close relationship of the North and South Island faunas would suggest that the presence of the Cook Strait is of much less importance than the Southern Alps in the South Island in establishing discontinuity in the faunal distribution. It is clearly evident that a series of interchanges of fauna have been possible, in the not very remote past, across Cook Strait. In the northern half of the South Island there are two very distinct faunal areas, one on each side of the main dividing range, which show little relationship to each other. Each South Island area, however, is intimately related to an area in the North Island: the eastern portion of the South Island (Area F) to the southern region of the North Island (Area E), and the western portion of the South Island (Area D) to the middle region of the North Island (Area C). To provide a plausible interpretation of this data it is necessary to postulate the presence of two distinct migration routes, one connecting the southern region of the North Island to some point on the north-east coast of the South Island and a further link connecting the north-west coast of the South Island with the Taranaki-Manawatu area.

Te Punga (1953 a,b) points out that the presence of South Island rocks in North Island Post-Castlecliffian conglomerates indicates that in late Pleistocene times there was a continuous coast between the D'Urville Island region and the Manawatu District. From this evidence he postulated the presence of a broad land connection between these two areas, which, however, did not extend much further west than D'Urville Island. Te Punga correlated this geological evidence with that demonstrated by the distribution of the Paryphanta snails and concluded that in the not-distant past there was also a narrow isthmian land link, trending east-west between a part of the Marlborough Sounds region and the Otaki district. The distribution of the harvestmen lends strong support to these suggestions but also indicates that there have been a number of somewhat similar connection in the past. As outlined earlier (p.304) the fauna of the northern portion of the west coast of the South Island (Area D) shows three distinct facies:—

(1) A strong endemic group which is centred in the north-west section of the area, distantly related to mid-North Island forms (at a specific level).

(2) A series of forms closely related to forms (usually at a sub-specific level) characteristic of mid-North Island fauna.

(3) A series of forms identical with forms characteristic of the mid-North Island fauna.

If the present localities in which these animals are found can be taken to indicate approximately the route by which distribution was achieved, then it might be suggested that the last two links with the South Island were made in the general region of D'Urville Island. Furthermore, it could be postulated that the occurrence of a number of allopatric sub-species in group 2 (*Nuncia obesa, N.o. magna, Hendea myersi assimilis, H.m. ochrea, H.m. roeweri*) resulted from glacial control as suggested by Willett (1948) to account for the similar distribution of Paryphanta snails. If this were so it would follow that the initial migration of the ancestral stock of this group was achieved well before the onset of the last glaciation.

The fauna of the eastern area of the South Island also consists of three groups which can be compared directly with those found to the west, but the affinity of this fauna is with the southern portion of the North Island and would indicate at least three distinct periods of linkage between these areas roughly contemporaneous with the exchange of fauna between Areas C and D.

It may therefore be clearly seen that, as far as can be deduced from the harvestmen distribution, the composition of the fauna of the northern half of the South Island can be attributed in the main to migration across Cook Strait and that these migrations must have taken place after the establishment of the Main Divide as an effective barrier to east-west migration.

South Island

The distribution of the harvestmen in the South Island suggests four main faunal centres. As mentioned earlier, the main divide separates the major part of the island into a distinctive eastern and a western fauna. The western fauna extends as far south as the Haast River, to the south of which it is replaced by the Fiordland-Southland fauna. On the eastern side, however, there is a definite break in the region of the Rangitata River and a less well defined break further south which is suggested in this paper to run south from Lake Wakatipu approximating the course of the Mataura River. The fauna of the southern portion of the South Island is comparatively uniform, although there is evidence of an eastern and western distribution centre.

The endemic fauna of the Canterbury-Marlborough region (Area F) is centred in northern Marlborough and mid-Canterbury in the vicinity of Banks Peninsula. Willett (1948) suggests that glaciation would have reduced the forested areas to small pockets on Banks Peninsula and to the north. This restriction of forest cover, combined with the dry and somewhat arid conditions which must have accompanied the deposition of loess over a large portion of this country, could well explain the paucity of the old endemic fauna and the present restricted centres of distribution.

The distribution of the fauna of the Otago area (Area G) would seem to suggest that in the more remote past this area was, in fact, not a distinct area but merely a southern extension of Area F and a northern extension of Area H, with a boundary somewhere in the vicinity of Latitude 46° S. and that the breakdown of this barrier was followed by the establishment of northern and southern barriers, situated in relation to the boundaries which are indicated at present.

The Fiordland-Southland area (Area H) supports perhaps the most varied endemic fauna to be found in any area of New Zealand which, as discussed previously, suggests the continued maintenance of suitable ecological conditions over a long period of time. The fauna of Stewart Island is also strongly endemic but does show considerable affinity with the fauna of the adjacent mainland of the South Island.

CORRIGENDA

P. 17, line 35 “*Psalenoba* Roewer, 1931” should read *Micronuncia* n. sub. gen.

P.18, line 6 “*oconnori paucispinosa* n.s.sp.” should read *paucispinosa* n.sp.

P.19, line 8 “*magnopercula* n.sp.” should read *conjuncta magnopercula* n.s.sp.; line 10 “*magnopercula fiordensis* n.s.sp.” should read *conjuncta fiordensis* n.s.sp.

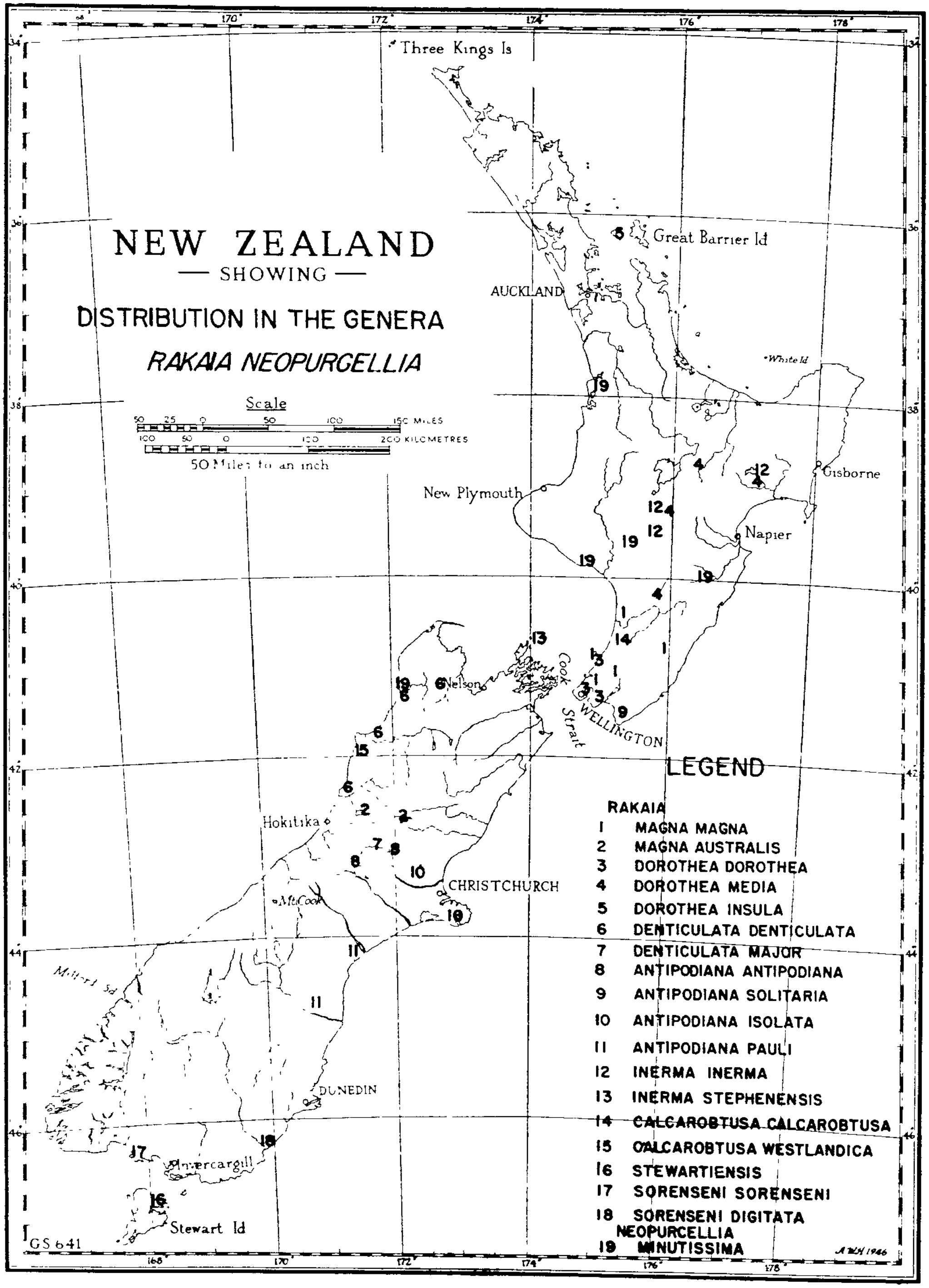
P.46, first line “*fiiorensis*” should read *fiordensis*.

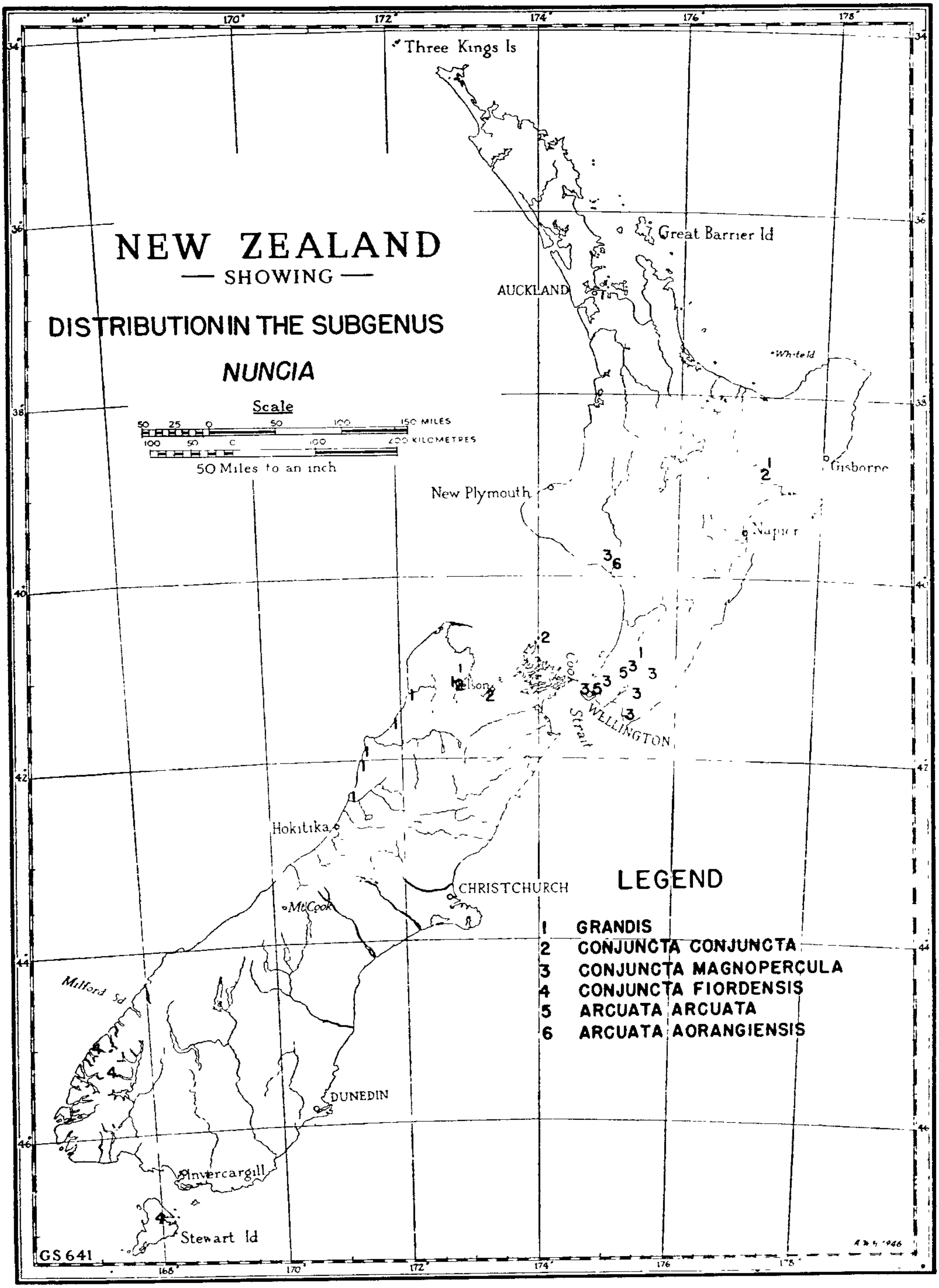
P.179, third line from bottom of page “*hoggi longispinosa* n.s.sp.” should read *chiltoni longispinosa* n.s.sp.

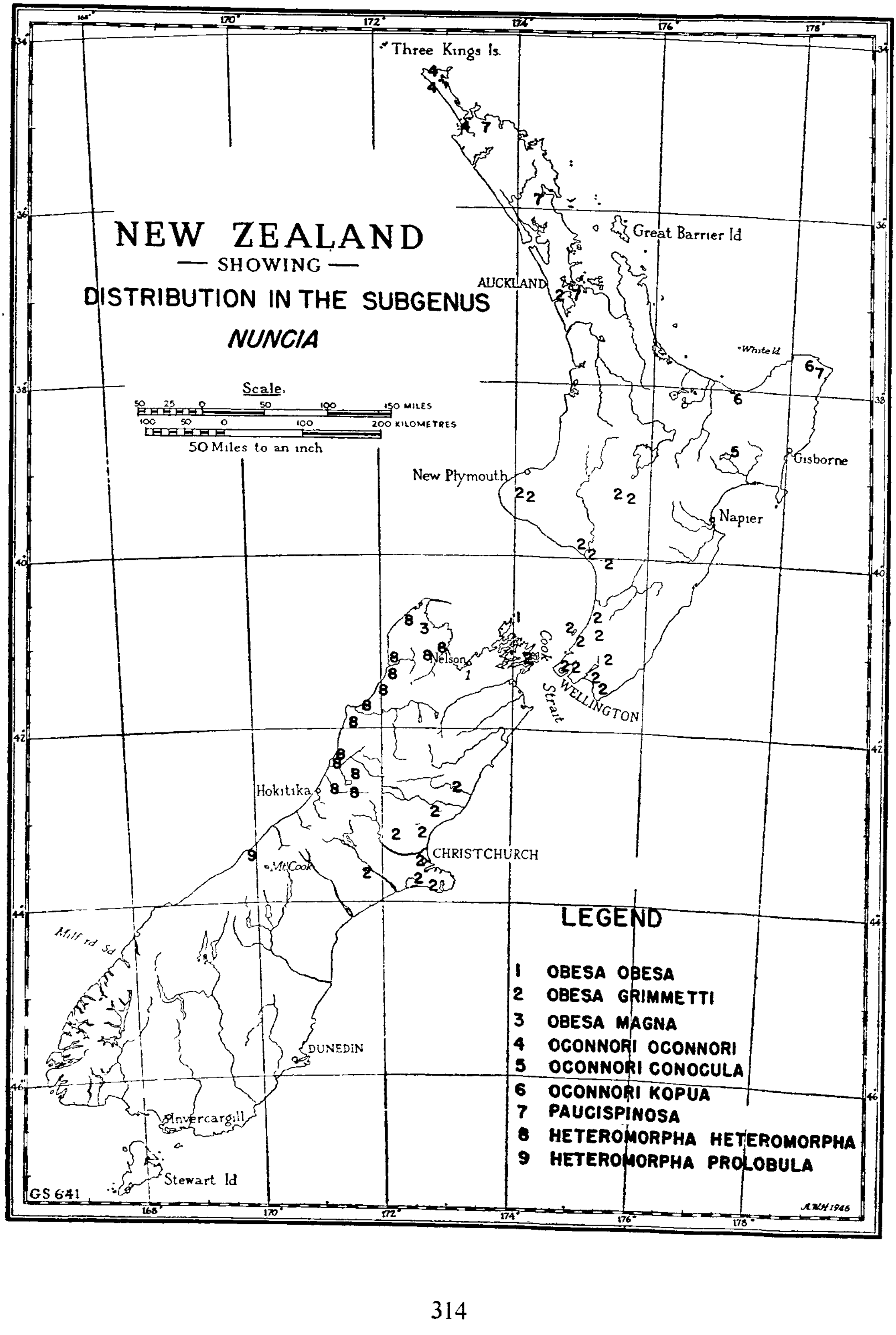
P.179, last line “*hoggi oconnori* n.s.sp.” should read *chiltoni oconnori* n.s.sp.

APPENDIX

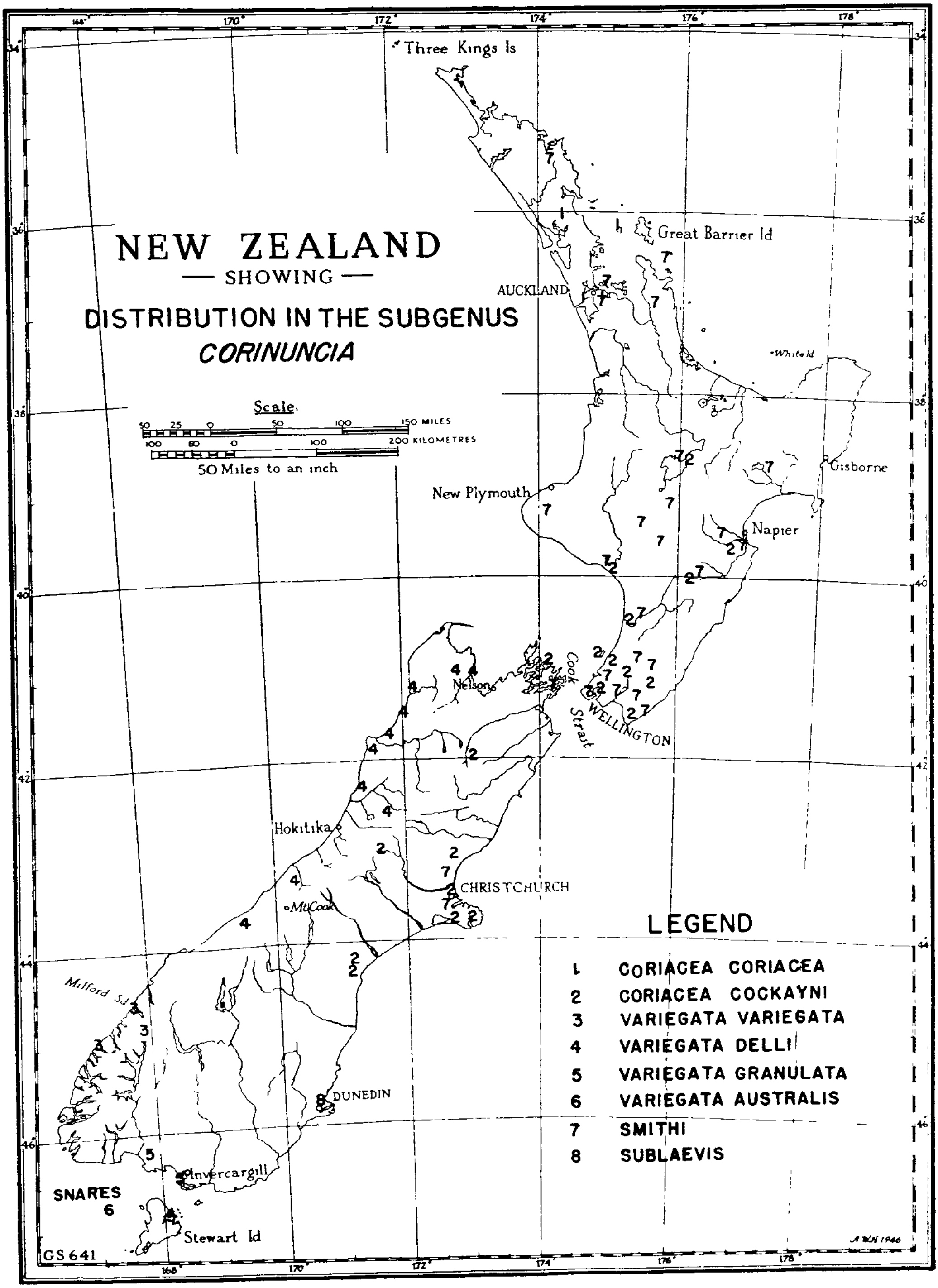
MAPS SHOWING THE DISTRIBUTION OF NEW ZEALAND OPILIONES OF THE SUB-ORDERS CYPHOPHTHALMI AND LANIATORES

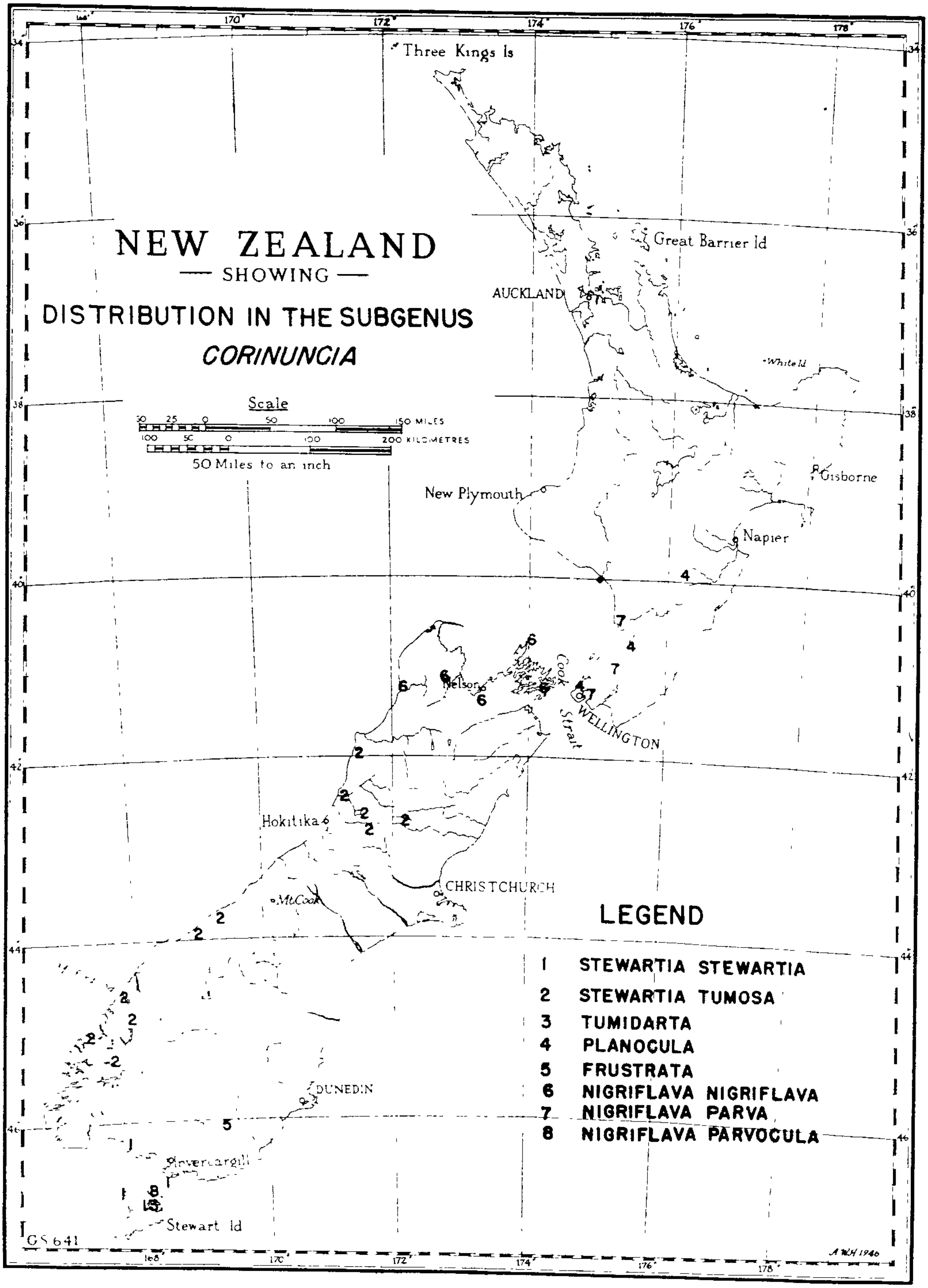

NEW ZEALAND
— SHOWING —
DISTRIBUTION IN THE GENERA
RAKAIA NEOPURCELLIA
Scale
50 25 0 50 100 150 MILES
100 50 0 100 200 KILOMETRES
50 Miles to an inch
Three Kings Is
Great Barrier Id
AUCKLAND
White Id
Gisborne
New Plymouth
Napier
Nelson
Cook Strait
WELLINGTON
Hokitika
CHRISTCHURCH
Mt Cook
Milford Sd
DUNEDIN
Invercargill
Stewart Id
GS 641
A.W.H 1946
LEGEND
RAKAIA
1 MAGNA MAGNA
2 MAGNA AUSTRALIS
3 DOROTHEA DOROTHEA
4 DOROTHEA MEDIA
5 DOROTHEA INSULA
6 DENTICULATA DENTICULATA
7 DENTICULATA MAJOR
8 ANTIPODIANA ANTIPODIANA
9 ANTIPODIANA SOLITARIA
10 ANTIPODIANA ISOLATA
11 ANTIPODIANA PAULI
12 INERMA INERMA
13 INERMA STEPHENENSIS
14 CALCAROBTUSA CALCAROBTUSA
15 CALCAROBTUSA WESTLANDICA
16 STEWARTIENSIS
17 SORENSENI SORENSENI
18 SORENSENI DIGITATA
NEOPURCELLIA
19 MINUTISSIMA


NEW ZEALAND
— SHOWING —
DISTRIBUTION IN THE SUBGENUS
NUNCIA
Scale
50 Miles to an inch
Three Kings Is
Great Barrier Id
AUCKLAND
White Id
Gisborne
Napier
New Plymouth
Nelson
Cook Strait
WELLINGTON
Hokitika
Mt Cook
CHRISTCHURCH
Milford Sd
DUNEDIN
Invercargill
Stewart Id
GS 641
LEGEND
1 GRANDIS
2 CONJUNCTA CONJUNCTA
3 CONJUNCTA MAGNOPERCULA
4 CONJUNCTA FIORDENSIS
5 ARCUATA ARCUATA
6 ARCUATA AORANGIENSIS



NEW ZEALAND
— SHOWING —
DISTRIBUTION IN THE SUBGENUS
NUNCIA
Scale.
50 25 0 50 100 150 MILES
100 50 0 100 200 KILOMETRES
50 Miles to an inch
Three Kings Is.
Great Barrier Id
AUCKLAND
White Id
Gisborne
New Plymouth
Napier
Nelson
Cook Strait
WELLINGTON
Hokitika
Mt Cook
CHRISTCHURCH
Milford Sd
DUNEDIN
Invercargill
Stewart Id
LEGEND
1 OBESA OBESA
2 OBESA GRIMMETTI
3 OBESA MAGNA
4 OCONNORI OCONNORI
5 OCONNORI CONOCULA
6 OCONNORI KOPUA
7 PAUCISPINOSA
8 HETEROMORPHA HETEROMORPHA
9 HETEROMORPHA PROLOBULA
GS 641
A.W.H. 1946


NEW ZEALAND
— SHOWING —
DISTRIBUTION IN THE SUBGENUS
CORINUNCIA
Scale.
50 Miles to an inch
150 MILES
200 KILOMETRES
Three Kings Is
Great Barrier Id
AUCKLAND
White Id
Gisborne
New Plymouth
Napier
Nelson
Cook Strait
WELLINGTON
Hokitika
Mt Cook
CHRISTCHURCH
Milford Sd
DUNEDIN
Invercargill
SNARES
6
Stewart Id
GS 641
LEGEND
1 CORIACEA CORIACEA
2 CORIACEA COCKAYNI
3 VARIEGATA VARIEGATA
4 VARIEGATA DELLI
5 VARIEGATA GRANULATA
6 VARIEGATA AUSTRALIS
7 SMITHI
8 SUBLAEVIS


NEW ZEALAND
SHOWING
DISTRIBUTION IN THE SUBGENUS
CORINUNCIA
Scale
50 Miles to an inch
150 MILES
200 KILOMETRES
Three Kings Is
Great Barrier Id
AUCKLAND
White Id
Gisborne
New Plymouth
Napier
Nelson
Cook Strait
WELLINGTON
Hokitika
CHRISTCHURCH
Mt Cook
DUNEDIN
Invercargill
Stewart Id
LEGEND
1 STEWARTIA STEWARTIA
2 STEWARTIA TUMOSA
3 TUMIDARTA
4 PLANOCULA
5 FRUSTRATA
6 NIGRIFLAVA NIGRIFLAVA
7 NIGRIFLAVA PARVA
8 NIGRIFLAVA PARVOCULA
GS 641
A.W.H. 1946
170°
172°
174°
176°
178°
168°
34°
36°
38°
40°
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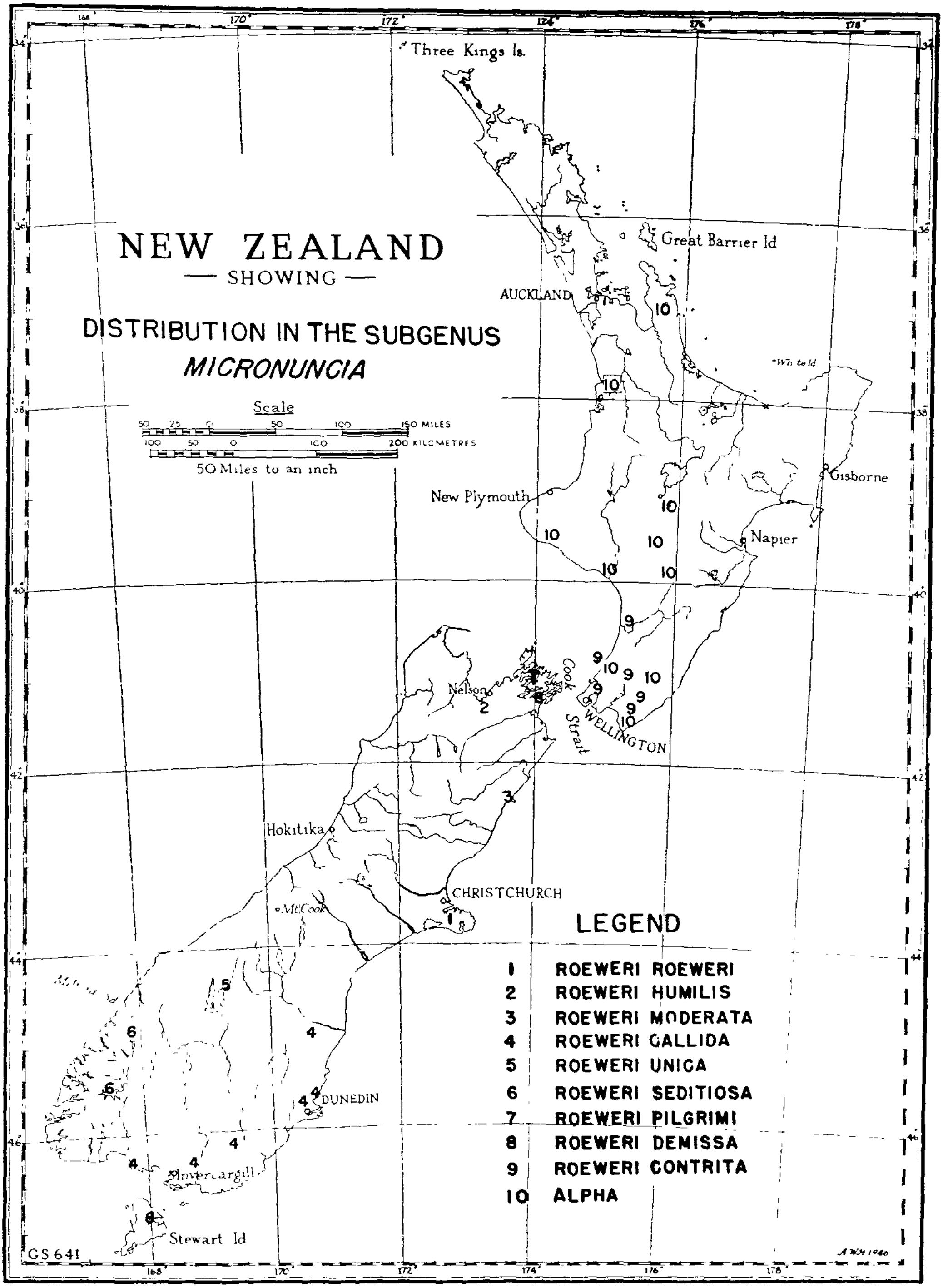
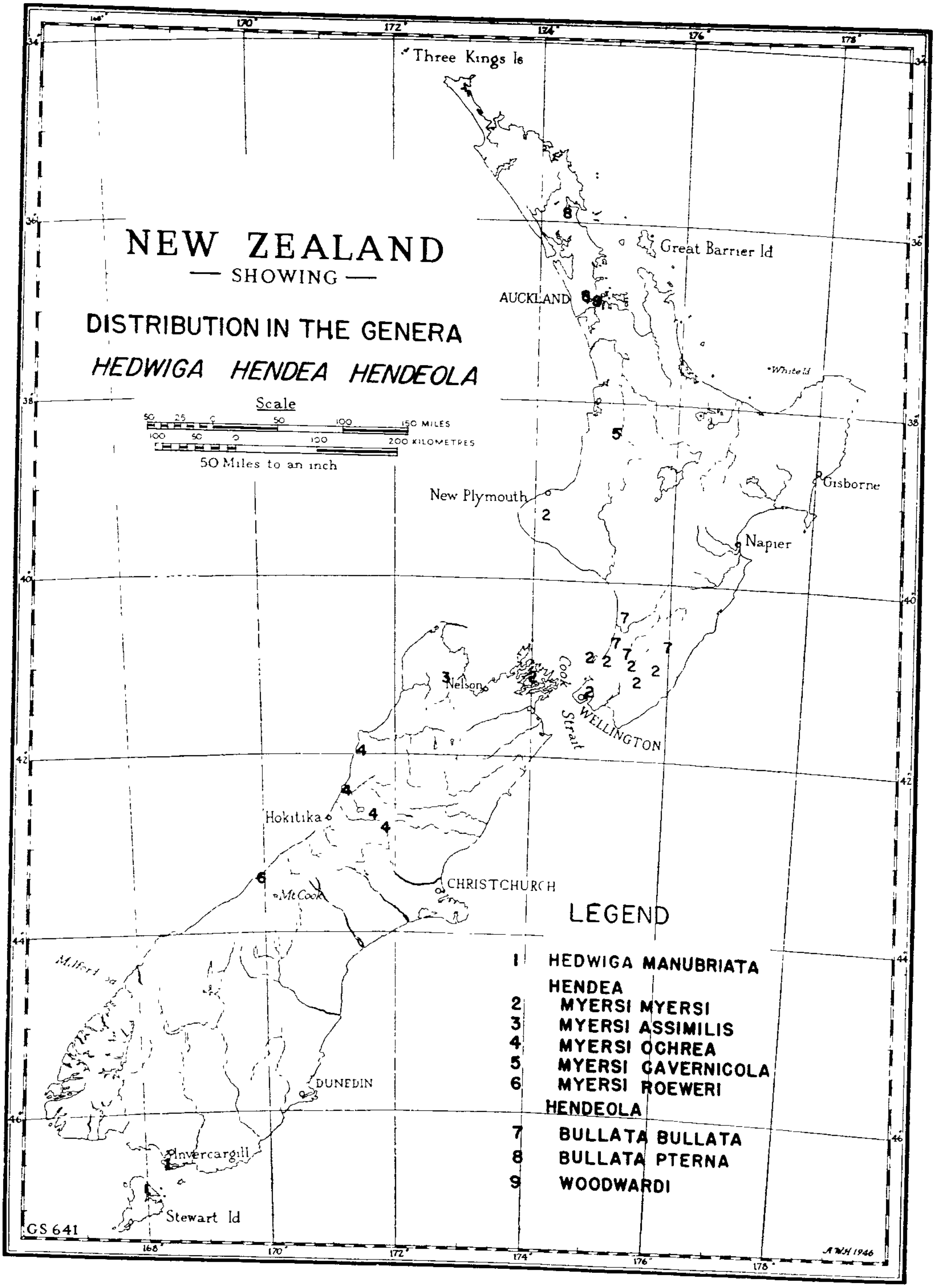
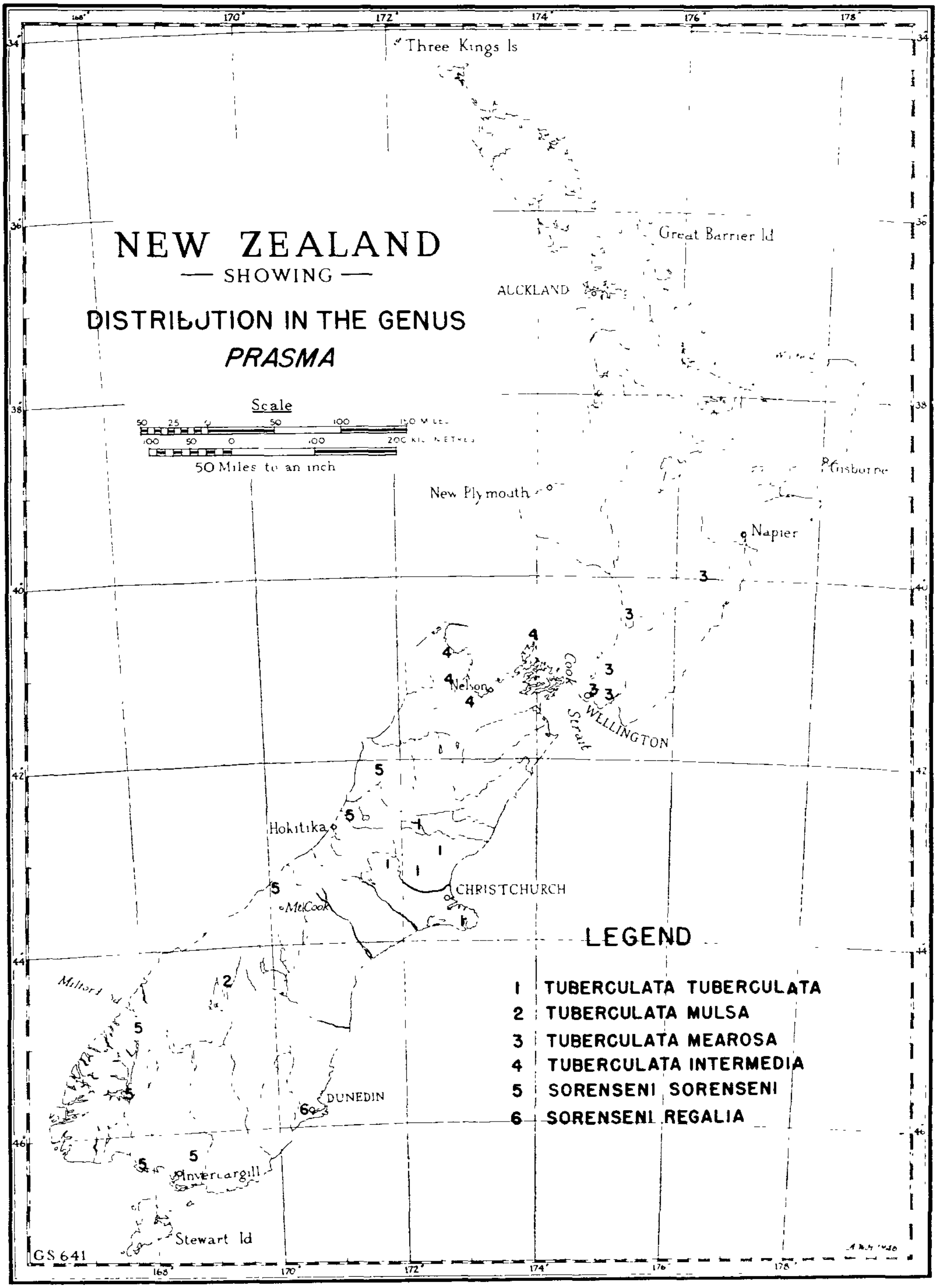
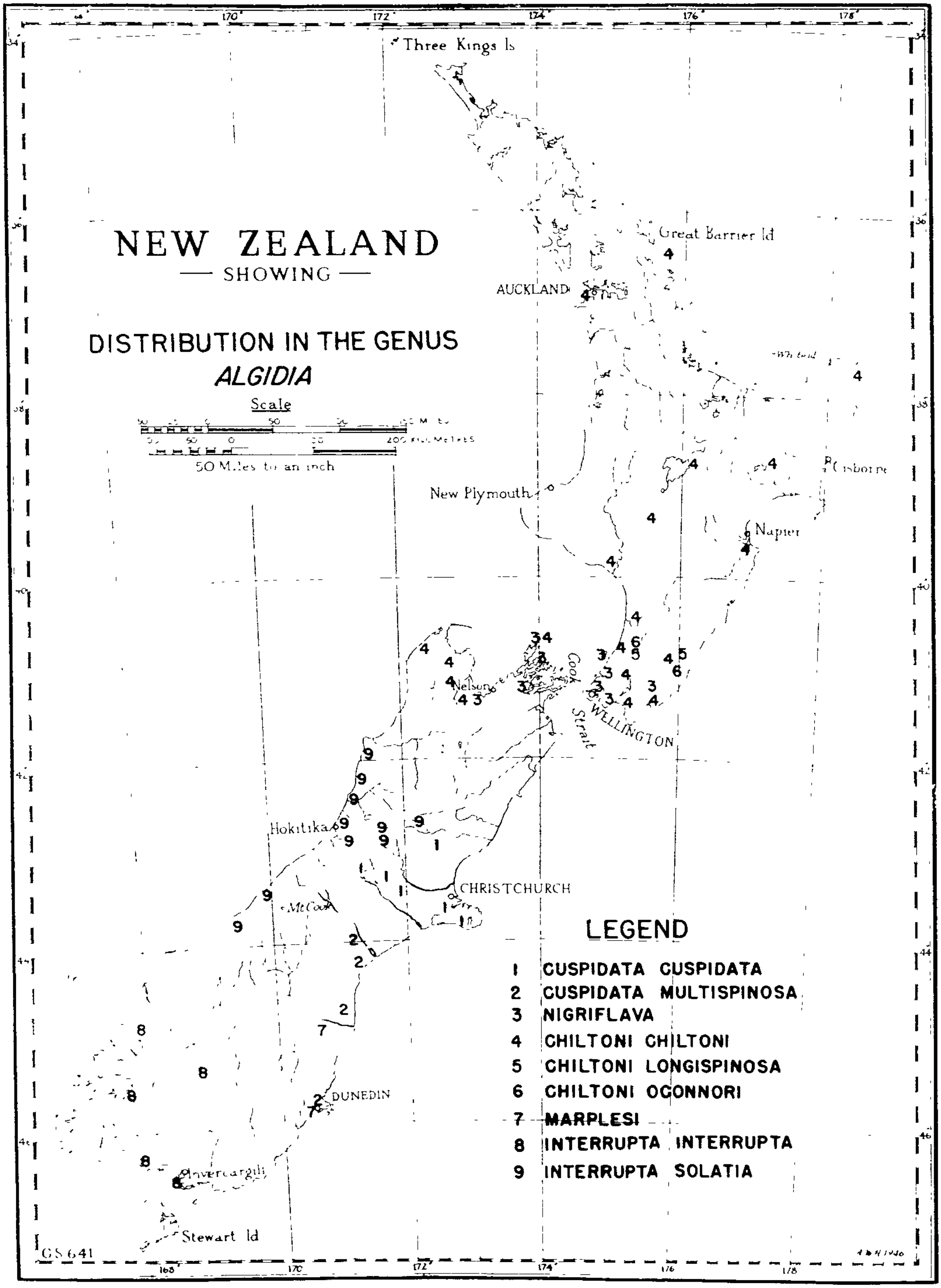
44°
46°

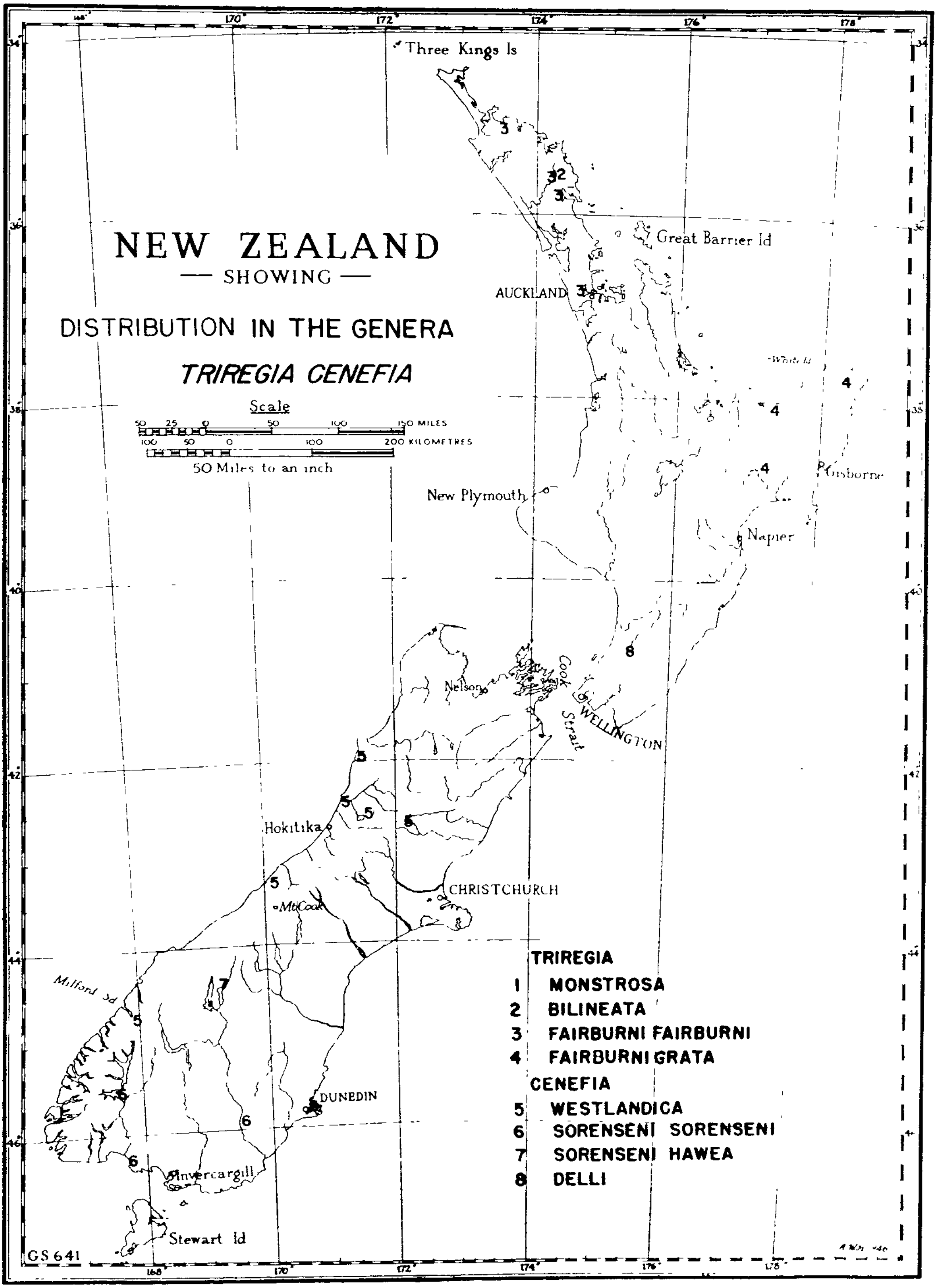


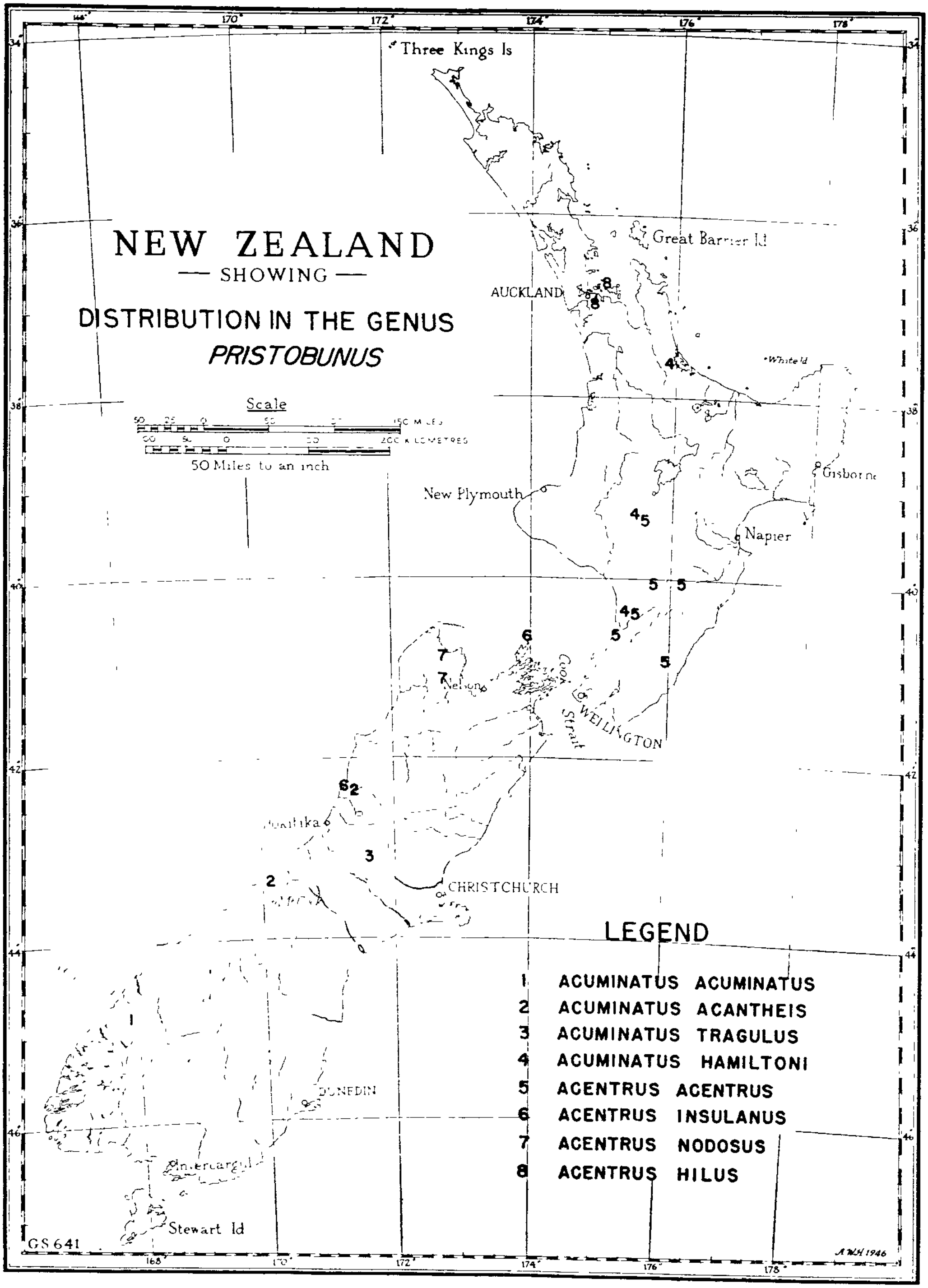
NEW ZEALAND
— SHOWING —
DISTRIBUTION IN THE SUBGENUS
MICRONUNCIA
Scale
50 Miles to an inch
Three Kings Is.
Great Barrier Id
AUCKLAND
Wh te Id
Gisborne
New Plymouth
Napier
Nelson
Cook Strait
WELLINGTON
Hokitika
CHRISTCHURCH
Mt Cook
DUNEDIN
Invercargill
Stewart Id
GS 641
A.W.H. 1946
LEGEND
1 ROEWERI ROEWERI
2 ROEWERI HUMILIS
3 ROEWERI MODERATA
4 ROEWERI GALLIDA
5 ROEWERI UNICA
6 ROEWERI SEDITIOSA
7 ROEWERI PILGRIMI
8 ROEWERI DEMISSA
9 ROEWERI CONTRITA
10 ALPHA

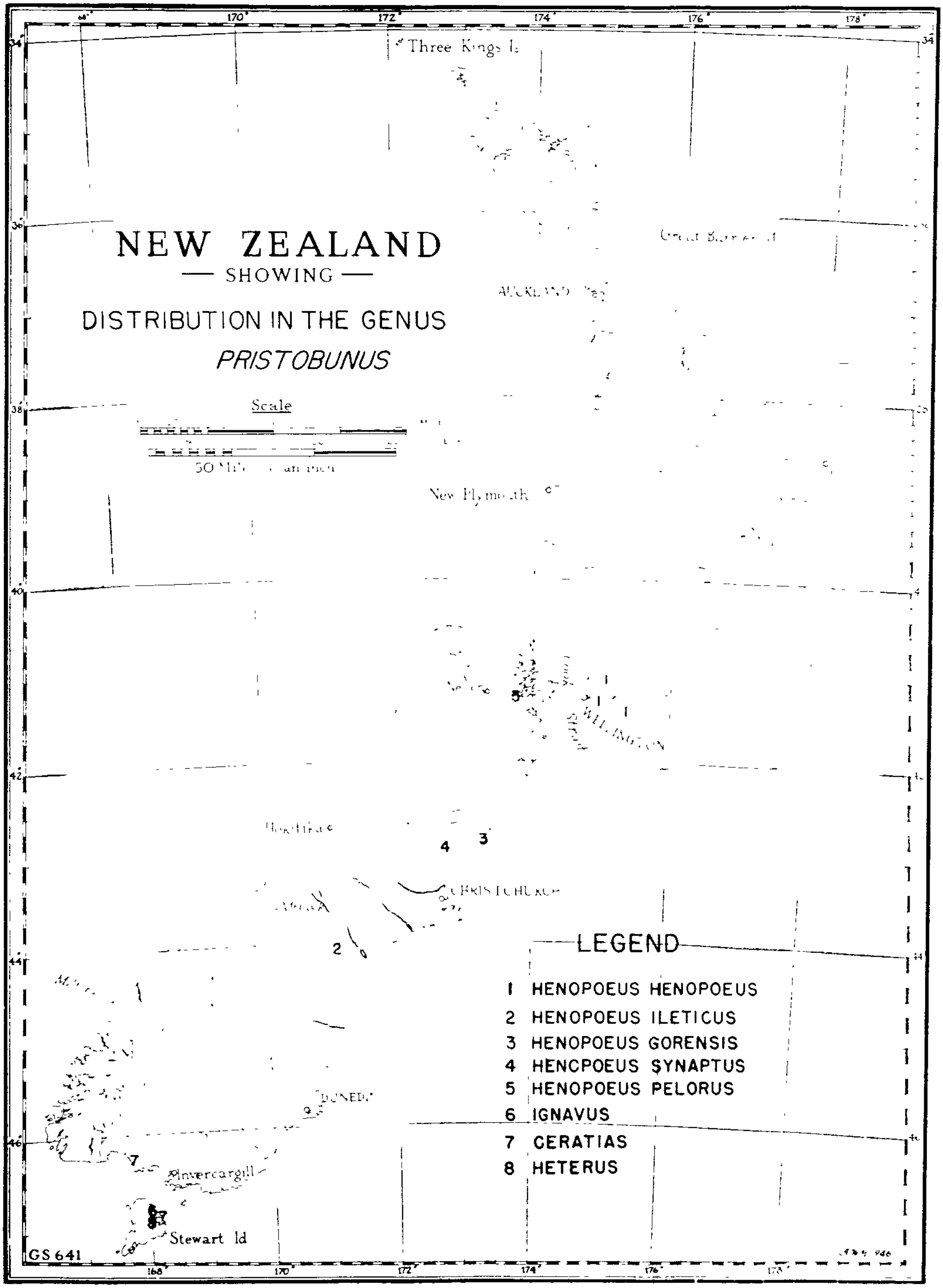

NEW ZEALAND
— SHOWING —
DISTRIBUTION IN THE GENERA
HEDWIGA HENDEA HENDEOLA
Scale
50 25 0 50 100 150 MILES
100 50 0 100 200 KILOMETRES
50 Miles to an inch
Three Kings Is
Great Barrier Id
AUCKLAND
White Id
Gisborne
New Plymouth
Napier
Nelson
Cook Strait
WELLINGTON
Hokitika
Mt Cook
CHRISTCHURCH
Milford Sd
DUNEDIN
Invercargill
Stewart Id
LEGEND
1 HEDWIGA MANUBRIATA
HENDEA
2 MYERSI MYERSI
3 MYERSI ASSIMILIS
4 MYERSI OCHREA
5 MYERSI CAVERNICOLA
6 MYERSI ROEWERI
HENDEOLA
7 BULLATA BULLATA
8 BULLATA PTERNA
9 WOODWARDI
GS 641
A.W.H. 1946
34° 36° 38° 40° 42° 44° 46°
168° 170° 172° 174° 176° 178°


NEW ZEALAND
— SHOWING —
DISTRIBUTION IN THE GENUS
PRASMA
Scale
50 Miles to an inch
Three Kings Is
Great Barrier Id
AUCKLAND
Gisborne
New Plymouth
Napier
Nelson
Cook Strait
WELLINGTON
Hokitika
Mt Cook
CHRISTCHURCH
Milford Sd
DUNEDIN
Invercargill
Stewart Id
LEGEND
1 TUBERCULATA TUBERCULATA
2 TUBERCULATA MULSA
3 TUBERCULATA MEAROSA
4 TUBERCULATA INTERMEDIA
5 SORENSENI SORENSENI
6 SORENSENI REGALIA
GS 641


NEW ZEALAND
SHOWING
DISTRIBUTION IN THE GENUS
ALGIDIA
Scale
50 Miles to an inch
Three Kings Is
Great Barrier Id
AUCKLAND
Gisborne
New Plymouth
Napier
Nelson
Cook Strait
WELLINGTON
Hokitika
Mt Cook
CHRISTCHURCH
DUNEDIN
Invercargill
Stewart Id
GS 641
LEGEND
1 CUSPIDATA CUSPIDATA
2 CUSPIDATA MULTISPINOSA
3 NIGRIFLAVA
4 CHILTONI CHILTONI
5 CHILTONI LONGISPINOSA
6 CHILTONI OCONNORI
7 MARPLESI
8 INTERRUPTA INTERRUPTA
9 INTERRUPTA SOLATIA


NEW ZEALAND
— SHOWING —
DISTRIBUTION IN THE GENERA
TRIREGIA CENEFIA
Scale
50 25 0 50 100 150 MILES
100 50 0 100 200 KILOMETRES
50 Miles to an inch
Three Kings Is
Great Barrier Id
AUCKLAND
White Id
Gisborne
New Plymouth
Napier
Nelson
Cook Strait
WELLINGTON
Hokitika
CHRISTCHURCH
Mt Cook
Milford Sd
DUNEDIN
Invercargill
Stewart Id
GS 641
TRIREGIA
1 MONSTROSA
2 BILINEATA
3 FAIRBURNI FAIRBURNI
4 FAIRBURNI GRATA
CENEFIA
5 WESTLANDICA
6 SORENSENI SORENSENI
7 SORENSENI HAWEA
8 DELLI


NEW ZEALAND
— SHOWING —
DISTRIBUTION IN THE GENUS
PRISTOBUNUS
Scale
50 Miles to an inch
Three Kings Is
Great Barrier Id
AUCKLAND
White Id
Gisborne
New Plymouth
Napier
Nelson
Cook Strait
WELLINGTON
Hokitika
CHRISTCHURCH
DUNEDIN
Invercargill
Stewart Id
GS 641
A.W.H. 1946
LEGEND
1 ACUMINATUS ACUMINATUS
2 ACUMINATUS ACANTHEIS
3 ACUMINATUS TRAGULUS
4 ACUMINATUS HAMILTONI
5 ACENTRUS ACENTRUS
6 ACENTRUS INSULANUS
7 ACENTRUS NODOSUS
8 ACENTRUS HILUS


NEW ZEALAND
SHOWING
DISTRIBUTION IN THE GENUS
PRISTOBUNUS
Scale
Three Kings Is
AUCKLAND
New Plymouth
WELLINGTON
CHRISTCHURCH
DUNEDIN
Invercargill
Stewart Id
LEGEND
1 HENOPOEUS HENOPOEUS
2 HENOPOEUS ILETICUS
3 HENOPOEUS GORENSIS
4 HENCPOEUS SYNAPTUS
5 HENOPOEUS PELORUS
6 IGNAVUS
7 CERATIAS
8 HETERUS
GS 641
168°
170°
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174°
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178°
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36°
38°
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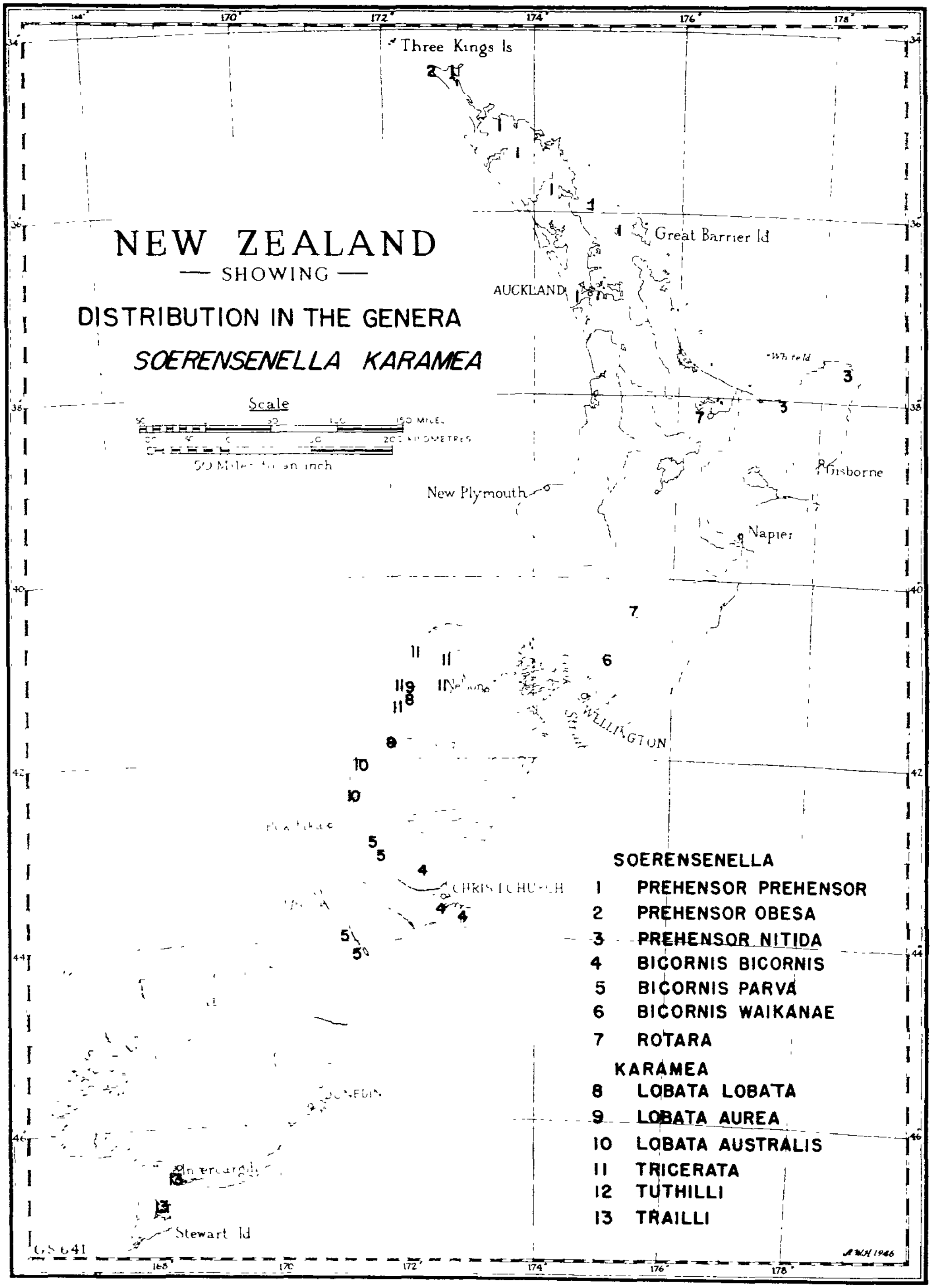
42°
44°
46°


NEW ZEALAND
— SHOWING —
DISTRIBUTION IN THE GENERA
SOERENSENELLA KARAMEA
Scale
50 Miles to an inch
Three Kings Is
Great Barrier Id
AUCKLAND
White Id
Gisborne
New Plymouth
Napier
Nelson
WELLINGTON
Cook Strait
CHRISTCHURCH
DUNEDIN
Invercargill
Stewart Id
SOERENSENELLA
1 PREHENSOR PREHENSOR
2 PREHENSOR OBESA
3 PREHENSOR NITIDA
4 BICORNIS BICORNIS
5 BICORNIS PARVA
6 BICORNIS WAIKANAE
7 ROTARA
KARAMEA
8 LOBATA LOBATA
9 LOBATA AUREA
10 LOBATA AUSTRALIS
11 TRICERATA
12 TUTHILLI
13 TRAILLI
GS 641
AWH 1946

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